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The Brown *ElectroniK* Potentiometer . . . unsurpassed for outstanding performance . . . has been made more versatile with Con-Tac-Tor Mercury Switches for the control of electric and fuel-fired furnaces.

Continuous Balance makes possible ***Continuous*** Correction—recording—signalling. Con-Tac-Tor (glass enclosed) mercury switches are worthwhile features that eliminate corrosion problems and the need for extra relays—and are available in fourteen different switching actions.

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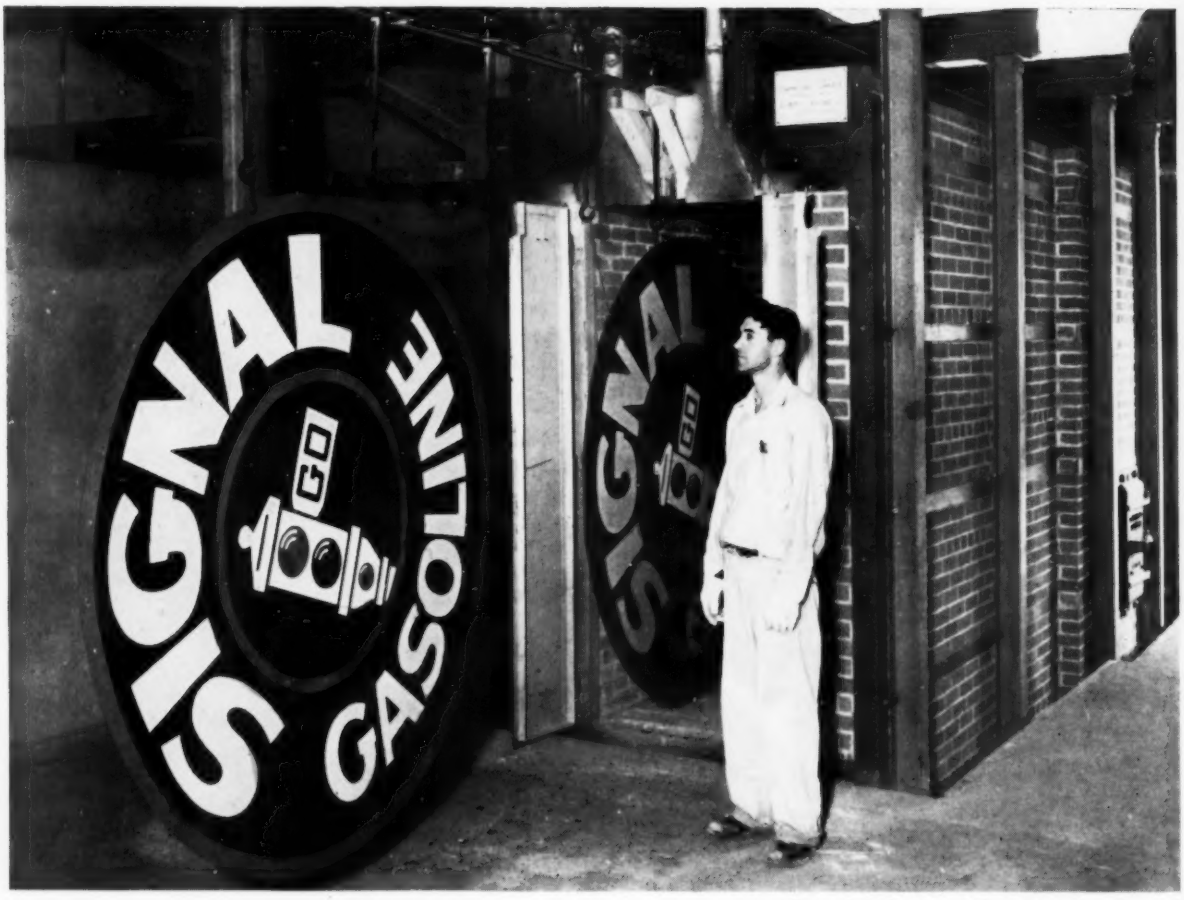
YOUR NEXT CONTINUOUS FURNACE SHOULD BE A BOLAND "SINGLE FLOW"



Typical Boland installation in the plant of U. S. Porcelain Enamel Co., Los Angeles, Cal.

Whether you will be running large multi-color, circular signs, or complicated fabricated parts in your next continuous furnace, the Boland Straight Away, "SINGLE FLOW" design is your best bet.

Boland construction provides a minimum opening consistent with the type of ware to be fired, and the straight away design eliminates "furnace conveyor wrecks."

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If you want these features (and the results they insure) in your next continuous furnace, specify a Boland "SINGLE FLOW".

LET US END YOUR FURNACE WORRIES — WRITE OR WIRE TODAY

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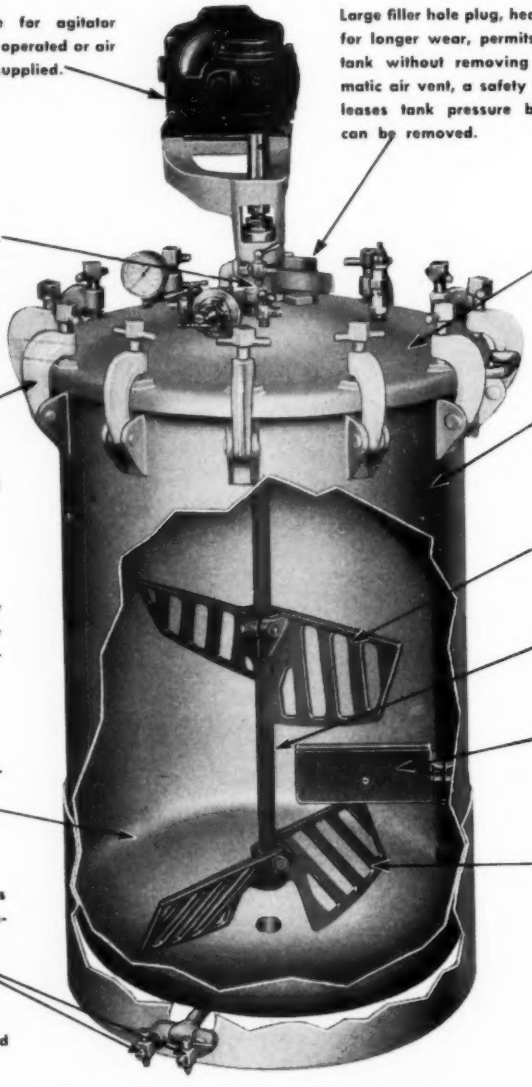
BETTER THINGS FOR BETTER LIVING
. . . THROUGH CHEMISTRY

THE IMPROVED DE VILBISS



Electric motor drive for agitator recommended. Hand operated or air motor drive can be supplied.

Large filler hole plug, heavily plated for longer wear, permits filling the tank without removing lid. Automatic air vent, a safety feature, releases tank pressure before plug can be removed.

Agitator shaft supported in oversize oil-impregnated bearings; easily accessible for oiling. Patented seal keeps material from entering bearing; vented channel prevents pressure build-up and forcing oil into material.

Pressed steel lid, heavily plated on the outside, spray coated with molten aluminum on the inside.

Rugged lid clamps for greater safety, for resisting wear and abuse.

Tank shell drawn from heavy gauge corrosion-proof and wear-resistant metal.

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Built of materials that are easy to clean and will not chip, flake or rust to contaminate or discolor spray materials.

Heavy stainless steel agitator shaft.

Stationary agitator baffle prevents swirling and deflects material back into rotating agitators.

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Built to A.S.M.E. specifications or Massachusetts code. Maximum working pressure 110 pounds, exceeding customary air line pressure.

Tanks available in 15, 30 and 60 gallon capacities.

DESIGNED AND BUILT FOR CERAMIC AND ENAMELING SERVICE

PRESSURE FEED TANK

Specially Designed

for better handling of vitreous finishing materials

Here's another development in the DeVilbiss Line of Spray Equipment that is specifically engineered and built for the porcelain enamel and ceramic industry. This improved pressure feed tank will give you longer service in providing more thorough care and more efficient handling of your vitreous spray materials.

Look at the features of this DeVilbiss Tank. You'll find several new operating and construction developments there. You will see that every vulnerable point is not only designed to reduce wear but is built of metals having special corrosion and abrasion-resisting qualities.

The improved DeVilbiss Pressure Feed Tank offers complete protection against the discoloration and contamination of your spray materials. It assures you of continuously efficient delivery of material to the spray guns. It is built to give you extra long service with a minimum of attention.

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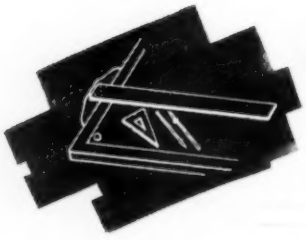
means **Quality** *in all four . .*

SPRAY EQUIPMENT
EXHAUST SYSTEMS
AIR COMPRESSORS
HOSE & CONNECTIONS

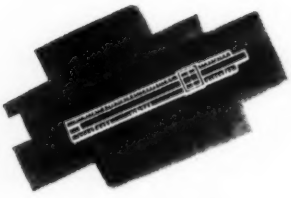
ERVITE

A NEW NAME
in porcelain enameling



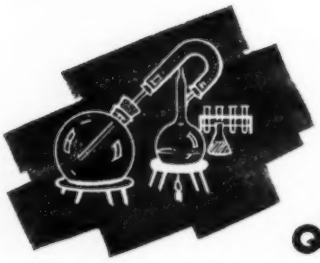
ENGINEERING APPLICATION

Yes, ERVITE is brand new . . . New in name, new in plant, new in equipment and new in method. New in everything but experience . . . plenty old and enamel-wise in that. ERVITE enameled products are technically controlled at all times. No rule-of-thumb, no-run-of-the-mill production. Each job is scientifically tested during all operations.



DEVELOPMENT SERVICE

ERVITE welcomes difficult porcelain enameling problems. Its engineers seek the opportunity to work with you in obtaining the best method of design and application to produce a faithful finish.



QUALITY WORK

ERVITE rigid quality specifications guarantee a perfect, everlasting finish. Each completed unit must pass an exacting, detailed inspection for beauty, color, uniformity, durability and bond.

Inquiries

Send your porcelain enameling problems to ERVITE *for engineering study and price quotations.*

ERVITE

ERVITE CORPORATION • ERIE, PENNSYLVANIA

THE Finish Line

THE PERENNIAL QUESTION which the porcelain enameling industry is called upon to pass judgment is that of a change in name. Your editor wrote his first editorial on this subject of nomenclature in the enameling industry in 1930, and has had occasion to cover some phase of the subject periodically ever since. It is sincerely hoped that there will be no occasion to further question the standard use of the words "porcelain enamel" for many years to come — although recent history would indicate this to be unjustifiable optimism.

A brief review

In a review of the nomenclature the word "enamel" should get our first consideration. "enamel" and "enameling," when used alone, are entirely correct to describe our industry's product and the art or process. But, "enamel" became inadequate and confusing to describe our product when it first came to be recognized by Webster's and other authoritative references as covering paints and varnishes as well as the "glasses."

The single word "porcelain" is *not* correct and probably never would be unless it were to be popularized to the point that the dictionaries and encyclopedias gave it recognition through popular usage, which appears to have been the case with "enamel," when used to describe the organic finishes.

If we can recognize the premise that the single word "enamel" needs a descriptive partner to avoid confusion between the organic and the ceramic type finishes we then have two choices: "vitreous enamel" and "porcelain enamel," either one of which is technically correct and has been recognized by the acknowledged references for years.

Which should we use?

Our personal preference is for "vitreous enamel" as the more truly descriptive of the available names and that would be rather difficult to confuse with competing materials. However, except in unusual cases we have discarded the name entirely in deference to industry standardization.

"Porcelain enamel" is certainly equal in its technical correctness and has the added advantage of more extensive popular acceptance. These names were given careful consideration by the Porcelain Enamel Institute when the Institute was first organized and it was the considered opinion of the P.E.I. that "porcelain enamel" should be chosen as the name for our industry's product and that its counterpart "porcelain enameling" should be the standard name for the process.

Why all the fuss?

This brings us back to our subject — "The perennial question." Every few years since 1930 the question of a name change has come before the industry. Many good suggestions have been made and they have been, for the most part, backed by sound reasons and constructive thought.

The most recent effort along this line lead to the appointment, early in 1945, of a P.E.I. "Name and Trade Names Committee," with R. A. Weaver as chairman. (See "Does porcelain enamel need a new name?" — February 1945 *finish.)*

Following careful study of the problem and consideration of suggestions from interested members of the industry, the committee has tendered its final report. Here are brief excerpts:

" . . . an honest effort was made to find out if we could put across a new name that would do justice to our product.

"The committee has finally concluded that we would simply add more confusion if we attempted to adopt an entirely new name. It has decided that we should continue to include the word 'enamel' in the name.

"The committee therefore suggests that all members of the industry concentrate on the words 'Porcelain enamel' in describing our finish . . . "

"What's in a name?"

In a name itself — nothing! In the things for which it stands — character, quality, usefulness, service and all the attributes of man or product — a name, a *good name*, means everything.

As a product name, "porcelain enamel" has a heritage in history that is unsurpassed. In its present stage of development "porcelain enamel" gives to scores of metal products an otherwise unattainable degree of beauty, protection and permanence for which we may be justifiably proud. Let's quit worrying about the name and keep our attention focused on increasing the value and service of the product it represents.

The real answer to the value of any product name is in its meaning to the man on the street and the housewife in the kitchen. Our job would seem to be one of continued research and development, resulting in constant improvement of product — plus — a new and greater recognition of the importance of using recognized channels for the education and enlightenment of the ultimate consumer.

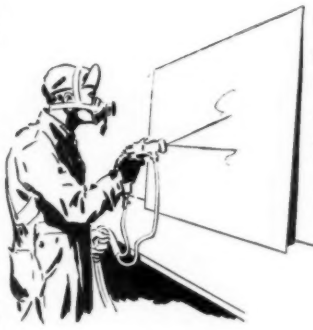
Dana Chase

EDITOR AND PUBLISHER

New Vitreous Enameling Base
Solves Many Shop Problems

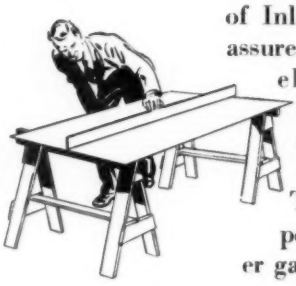
TI-NAMEL—Inland's new enameling alloy steel—eliminates the standard cobalt ground coat—cuts costs—improves quality.

Inland TI-NAMEL can be used for fabricating parts requiring the finest deep drawing steel. It permits drawing many parts heretofore formed and welded.



Thin cover coat enamels—white, or any color—are applied directly on TI-NAMEL. These thin coats, which eliminate the necessity for edging, have high reflectance.

One of the outstanding advantages of Inland TI-NAMEL is that it does not age-strain. Drawn shapes remain free from strain lines regardless of time lapse between rolling and final shop operations.



Increased sag resistance of Inland TI-NAMEL assures porcelain enameled ware that is truer to desired shape and of better appearance. This characteristic permits use of lighter gauge stock.

Pending patent applications on the new enameling process and products made thereby are owned jointly by Inland Steel Company and Titanium Alloy Manufacturing Company under trust agreement.

Write for the new TI-NAMEL Bulletin!

Principal Products: **Bars • Structurals • Plates • Sheets • Strip • Tin Plate • Floor Plate Piling • Reinforcing Bars • Rails • Track Accessories**

INLAND STEEL COMPANY

38 South Dearborn Street, Chicago 3, Ill.

Sales Offices: **Cincinnati • Detroit • Indianapolis • Kansas City • Milwaukee New York • St. Louis • St. Paul**

INLAND TI-NAMEL

A new west coast plant

designed for straight line production

The Norris Stamping plant includes interesting features— "world's largest" continuous furnace, twelve-tank pickle room, overhead dryers and two-fifths mile of conveyor chain

By Gilbert C. Close • LOS ANGELES CORRESPONDENT FOR FINISH

finish Scheduled to start production approximately May 1st, the new Porcelain Enameling Department at Norris Stamping & Manufacturing Company, Los Angeles, will add tremendously to West Coast enameling facilities. This installation will be the largest on the Coast, and in certain respects will steal the thunder of huge Eastern concerns who have been turning out enameled products for years.

The department will be housed in a building division 120 ft. by 260 ft. in size, and floor area, supplemented by overhead ramps and mezzanines, will total 31,200 square feet. The largest enameling furnace in the world is now under construction. More than two-fifths of a mile (2100 ft. plus) of overhead conveyor chain, not counting the conveyor in the pickle room, will handle the work through the various departments.

A plant designed for straight line production

To insure overall efficiency, plant layout, installation and subsequent production have been placed in the hands of two men who may be said to have "cut their teeth" on an enameled ring and who have been breathing the air of enameling plants ever since — namely, Karl Raife and Glen Fulton. These old timers know what it takes to make an enameling plant click. They've combined their 40 years of experience in developing streamlined production facilities that should run as smoothly as warm oil on a glass rod.

"We're going in for straight production," Fulton emphasized, "and won't depend on jobbing contracts to keep us going." Refrigerator liners, washing machine tubs, bath tubs, sinks, and various small ware are included in current production plans.

The huge punch press and metal fabricating shops at Norris Stamping & Manufacturing Company offer the ultimate in pre-enameling production. This is particularly true in the case of welded components. Fusion welding, both gas and electric, spot welding, seam welding and flash welding will be employed. Norris developed a nation-wide reputation in metal drawing in cartridge case production during World War II. This experience will prove helpful in producing high-quality deep draws in sheet metal products.

The enameling department is laid out in a manner to minimize production effort and to provide for the numerous small contingencies that often act as miniature bottlenecks on any production line. There is ample storage space for stocks to be enameled, and for work in process. The conveyor systems are installed in a manner to provide easy transfer of parts from one to another, and to facilitate change from ground coat to white coat work. Preliminary estimates indicate that the entire department in full production can be handled by 35 employees each shift.

Balcony for mill room storage

A slip storage tank platform supporting 10 storage tanks is located 7 ft. above the floor adjacent to one incoming ramp. Five of the tanks for miscellaneous materials are of 2325 lbs. capacity; the black edge tank and liner tank are of 5625 lbs. capacity; and three tanks for ground coat, liner and tub white, and white acid resistant slips are of 19,000 lbs. capacity each. Miscellaneous chemical storage bins are provided adjacent to the slip storage platform. A porcelain enamel laboratory and office space occupies a corner of the room directly opposite the slip tanks.

Another room directly opposite the frit storage and loading mezzanine contains water softening equipment. Three ball mills will be available, two of them 5 ft. by 6 ft. in size, the third 3 ft. by 4 ft. in size. These mills are of a new type.

Enough space is available between the frit mills and pickle room to contain an entire day's run of raw stock. Pickling baskets may be wheeled at will through the raw stock piles during loading.

Twelve-tank pickling room

The pickling room contains twelve 10 ft. by 14 ft. tanks, including precleaning, two cleaning, hot and cold rinse, acid and acid rinse, neutralizer and drying. A nickel dip and nickel rinse are available, and will be used when required.

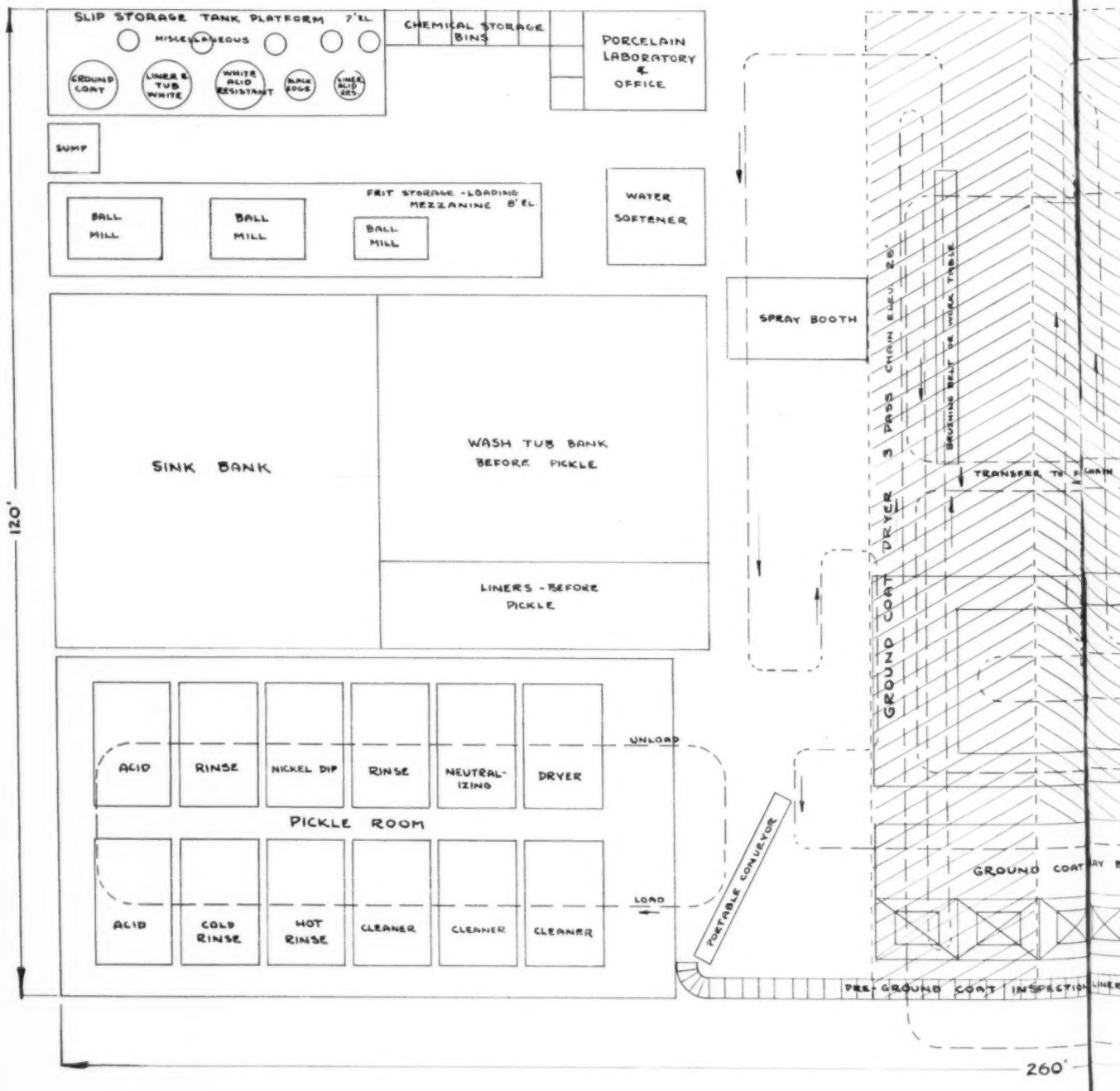
The loaded pickling baskets are handled by an overhead monorail system. Power for the system is provided by a 40 ft. flexible electric cable fed from a reel in the center of the room. The dryer is gas-fired; each of the three cleaner tanks is heated by 450 ft. of 2-inch steam pipe operating at 80 lbs. pressure. "That may seem like a lot of pipe," Karl Raife exclaimed, "but it will insure plenty of tank agitation."

When the raw stock leaves the pickling room, it may be transferred directly to an overhead conveyor which carries it through the ground coat booth, or to a roller conveyor which bypasses the booth and leads

to Page 16 →

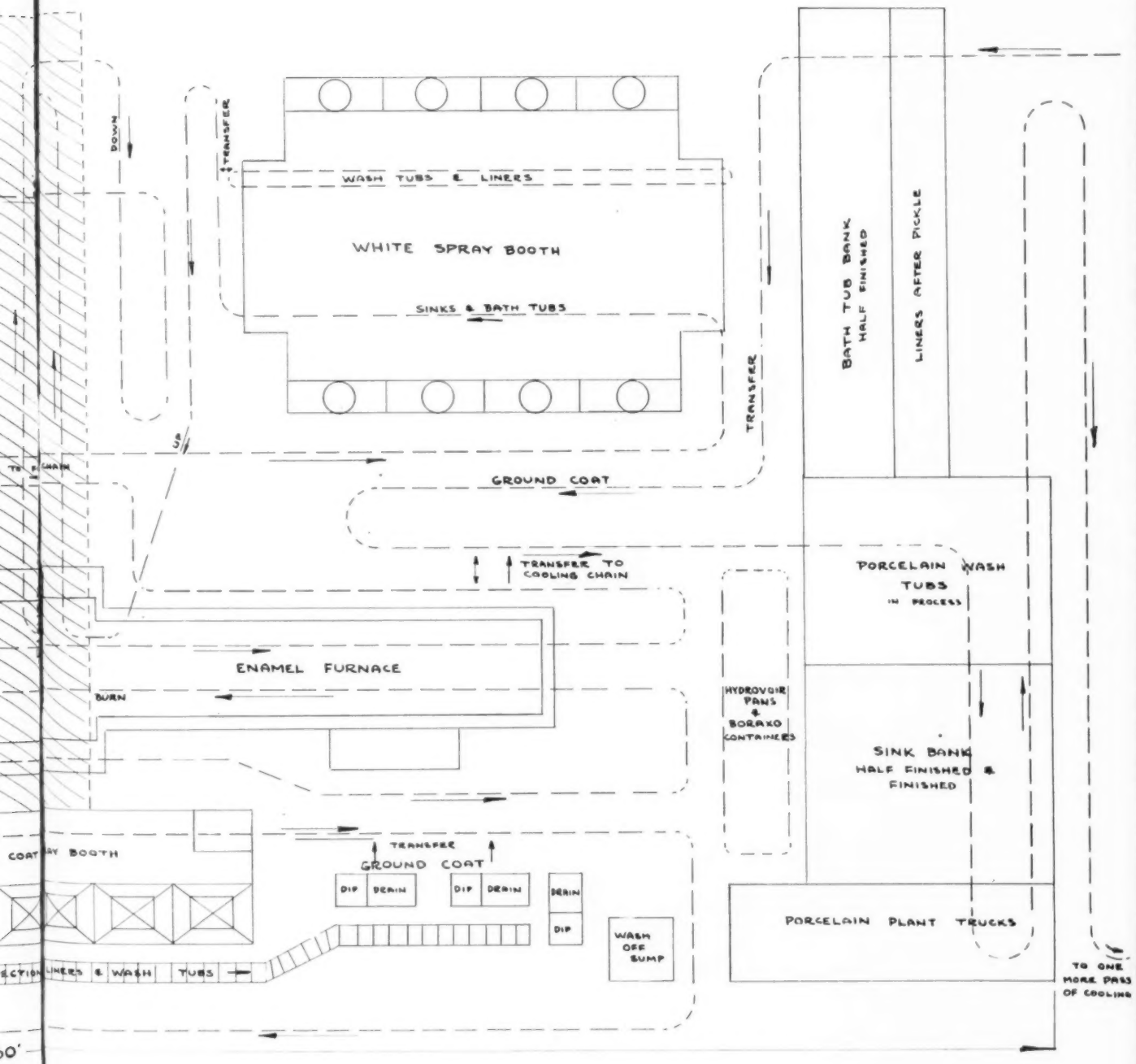
See layout . . . Pages 14 & 15

NORRIS STAMPING & MANUFACTURING COMPANY



SEE DESCRIPTION

PORCELAIN ENAMELING PLANT LAYOUT



PAGES 13 AND 16

→ *from Page 13*

to three ground coat dip tanks. The dipped parts are transferred to the conveyor after it emerges from the spray booth. This conveyor then continues onward, mounts an incline, and makes three passes through an overhead 20 ft. by 120 ft. drying oven.

Overhead enamel drying ovens increase usable floor space

The overhead drying oven is an interesting installation. Clearance between the oven bottom and plant floor is 16 ft., thus it does not interfere in any way with floor space. The total installation is composed of both the ground coat dryer dimensions as given, and a white coat drying chamber 20 ft. by 100 ft. in size. Ground coat and white coat drying chambers are separated by a 2-inch wall.

When the ground coat conveyor line leaves the drying oven, it descends to normal level and runs parallel with the furnace conveyor for approximately 30 ft. The furnace conveyor is unique in that it passes entirely around the outside of the furnace, thus facilitating loading or unloading at widely separated points, and at the same time allowing work emerging from the furnace to cool to the point where it can be handled with ordinary gloves before transferring to the cooling conveyor.

"World's largest" continuous enameling furnace

The furnace is 103 ft. long overall. The burning zone is 33½ ft. in length, thus providing 67 ft. of travel through the burning zone. The burning chamber is 20 ft. wide, and pieces with 7 ft. vertical dimensions can be accommodated. Nine cross-fire gas burners provide heat, with an oil standby installation provided. Thermal capacity of the furnace will handle 12,000 lbs. of metal per hour.

When the ground coated parts emerge from the furnace, they are transferred directly to the cooling chain. This chain mounts to an overhead position, and provides 700 ft. of travel before descending and paralleling the white chain. Large parts for white coat continue through the white booth without removal from the conveyor; smaller parts are removed to a booth-contained conveyor for spraying, then replaced on the main conveyor chain. This chain, totaling 720 ft. in length, then moves upward and through the white compartment of the overhead drying oven.

Cover coat spray booths are glass enclosed

The white booths are completely glass-enclosed, and consist of two

to Page 48 →

Above: Glen Fulton, J. A. Kingston, plant manager, and Karl Raife inspect construction of the new furnace at the Norris Stamping and Mfg. Company plant.

Left: Interior view showing the 103 ft. U-type furnace, "world's largest," under construction.

Borden's to use more porcelain enamel

in Northern California

signs are custom built to dealer's needs but maintain company identity through design and color characteristics

By Elsa Gidlow • SAN FRANCISCO CORRESPONDENT FOR FINISH

BORDEN's Dairy Delivery Company, Northern California subsidiary of the great Borden organization, is one of the largest users of porcelain enamel in this region. Prevented during the war years from expanding the use of the material or from making replacements, they have had the opportunity to compare and observe porcelain store fronts, signs, fountain and backbar facings, and ice cream cabinet tops in relation to other materials. It is significant that they are now entering on a fine program making use of porcelain enamel in a wide variety of ways, and slowly getting into production in spite of difficulties.

The company's sign and store front program which up to the start of the war had made considerable headway throughout Northern California, was already attracting attention then; it has attracted more during the war years because the fronts and signs in porcelain enamel — each styled to the individual dealer's store architecture and location — have continued to present the shining white background with blue letters and red trim that identify the Borden distributor. Dealers and customers alike have commented on the fact that these signs and fronts look the same now as they did when they were put up.

Porcelain enamel used "inside" too

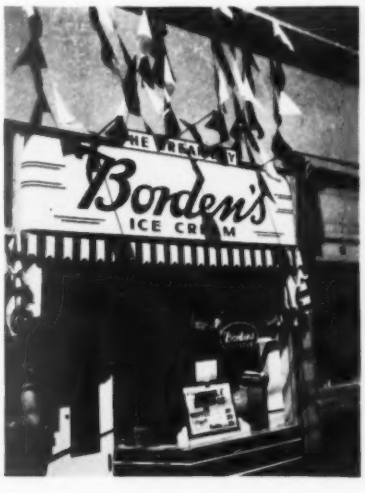
Not so spectacular because not so prominently in the public view is the performance of porcelain enamel on the company's equipment, such as fountains, backbars and cabinets. The satisfactory manner in which these have stood up causes the company's fountain men to swear by porcelain enamel.

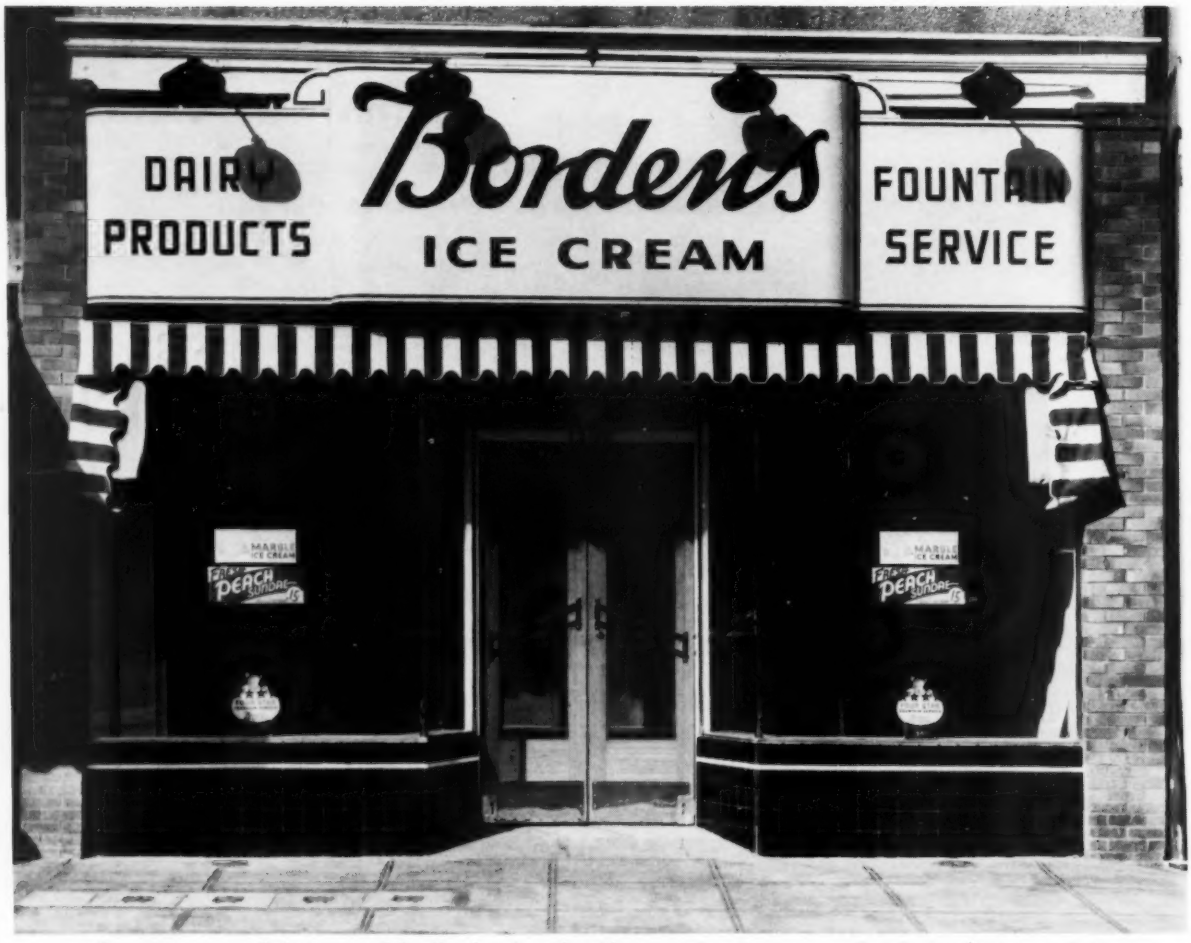
Borden's installs fountain equipment in any number of premises where its ice creams, milk, and other products are sold. This equipment has to stand up under some hard usage. Fountains with stools, for instance, get a good deal of kicking, scraping and knocking. Painted fountain bar fronts are unsightly in no time from the active feet of the customers. Leatherette does not hold up any better. Most of the materials and finishes other than porcelain enamel have been found to go to pieces in a short time. "But with porcelain enamel, you wipe it off and it looks and is as fresh and clean as new in a few moments." Thus, this material has the advantage for the company and its dealers of ease of maintenance and appropriateness to the clean, spotless atmosphere Borden's tries to have always associated with the place where its products are sold.

Use 18-gauge steel for porcelain enameled equipment

A second problem in equipment maintenance popped up when foun-

Typical Borden's installations. Left: Even if it is in Chinese the Borden identity is maintained. This sign gives prominence to an American-type soda fountain in the heart of San Francisco's Chinatown. Center: The Creamery, Fillmore Street in San Francisco, presented a problem of modernizing an old type building with an identification sign. Size is 20' x 4'. Right: Central Fountain. This Menlo Park stucco building has a sign 20' x 5', custom built to suit the front. The oval Borden sign above is in reverse coloring to the large sign.





Porcelain enameled sign used by Borden for identification of a creamery and soda fountain in a California Valley town. The 30' installation has the standard gleaming white background with blue letters and red trim typical of the many Borden installations.

tain workers used certain parts of the tops of ice cream cabinets on which to cut up foods, many of them aciduloous, like lemons, oranges and tomatoes. Borden's have thousands of their all-porcelain enameled ice cream cabinets in circulation among dealers in their territory, and an acid-resistant finish has been found to do the job of providing the surface for fountain activities. These cabinets have a regular place designed as a "work bench" and the fountain workers like it because it is so easy to keep sanitary. The cabinets range from two-hole up to 12-hole equipment; all are three feet wide and from four feet to ten and sometimes twelve feet long. They are made on 18-gauge metal in the Borden white with blue trim, and are leased to the company's distributors.

Both counter fronts and backbars of fountains where the porcelain enamel is utilized — as it is for all heavy-duty establishments — also are fabricated with 18-gauge steel. The company's own production department procures the enameling steel, cuts and fits it as required for the individual fountain, and jobs the enameling end of the process. The largest percentage of Borden-installed counter fronts are of porcelain enamel.

Expanded sign program to break

Any day now the company will break with an expanded version of the custom built identification sign and store front program which was initiated before the war and had to be suspended due to war restrictions. So well pleased are company executives — and the customers who have the signs — with the performance of porcelain enamel throughout the war period that they are continuing the original program and adding some new features that they are not ready to talk about at present.

When the original store identification sign project was launched with the offer of custom built signs tailored to each building and the wishes of the owner of the fountain or creamery, Borden salesmen did a job of intensive selling that spotted the signs all over Northern and Central California.

The postwar program with its additional features is expected to be launched by this coming summer.

The pictures with this article are some of the original installations that have stood the test of time and are selling Borden customers on accepting the new identification signs for their stores.

Automatic spraying

in the porcelain enameling industry

By L. W. Lammiman • SERVICE ENGINEER, THE DE VILBISS COMPANY, TOLEDO, OHIO

AUTOMATIC spraying has greater meaning and covers more territory than the two words imply. In order to have the meaning apply as intended in this article, it would be well to define automatic spraying as "spraying on a machine designed to support the object to be coated, convey it through the spray zone or zones, and while all surfaces of the object are exposed, coat it by the use of cam or lever actuated spray guns." In an automatic spraying machine there are a series of mechanical devices coordinated to work together harmoniously to insure efficient and economical operation.

Automatic spraying has aroused the interest of industry as a whole so it is only logical that the porcelain enamel industry shows the interest it does in the subject. During the war years, just passed, automatic spray finishing has had its fling. All the high production items in the vast array of war materials tested the ingenuity of the engineering staffs of spray equipment manufacturers with the result that ways and means were devised to coat particles of all shapes, both inside and out, at speeds hardly considered possible in pre-war days. This experience has been invaluable and industry today benefits in no small way in the solution of their high speed coating, finishing or enameling operations called for by the huge production required to meet the enormous pent up consumer demand. Our problem today is one of production — *production at a cost which permits profitable transactions* — profit in spite of restraints and restrictions. Automatic spray finishing is practically a necessity in our present day economic structure.

The four types of automatic spraying equipment

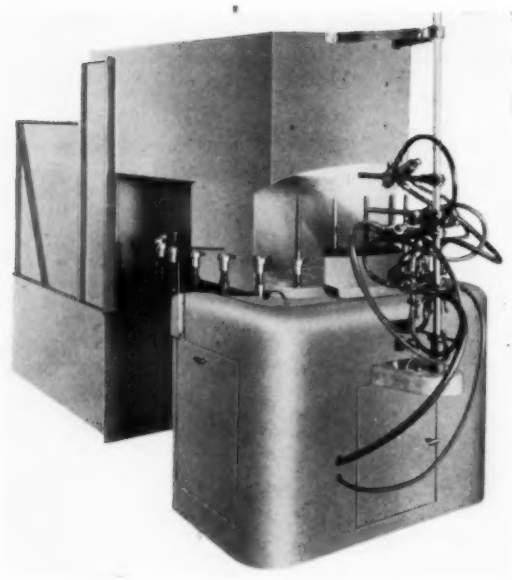
Out of the vast multitude of automatic spraying machines made during the war for doing the heretofore considered impossible, have come several types of machines which combine all the worthwhile proven features into a few well-developed and standardized machines for post war production. Those with the widest acceptance are (1) Rotary Turntable Type, (2) Chain Conveyor Type, (3) Cylinder Coating Type, (4) Transverse Moving Gun Type. These four types with their manifold variations have sufficient flexibility to handle practically all coating problems that come within their range of adaptability. While the first three of these have been used they are not in common use in porcelain enamel work but the type and principle of operation is sufficiently interesting to justify a brief description. The fourth, the Transverse Moving Gun Type, is the one of greatest interest to those with flat ware enameling production problems. This type will be covered in greater detail.

Rotary turntable, chain conveyor and cylinder coating types

The Rotary Turntable Type is just what the name implies — namely, a large diameter automatic revolving turntable with spindles for workholders properly spaced for the particular article coated. Spray Guns are permanently mounted to spray the article as it passes through the spray zone or are made to follow the work providing this is of importance for more efficient and economical coating. Spindles are revolved in the spray zone at the proper speed and number of turns to assure proper coating. Tripping mechanism actuated by loaded workholders sets the spray guns in operation—no work—no spray. Sturdy, simple construction makes for low initial cost as well as economical operation and maintenance. Symmetrical shaped articles which lend themselves to loading and unloading on a four or five foot diameter table adapt themselves to this type of machine. Production of 1500 to 4500 pieces per hour is possible depending upon the sizes of articles coated.

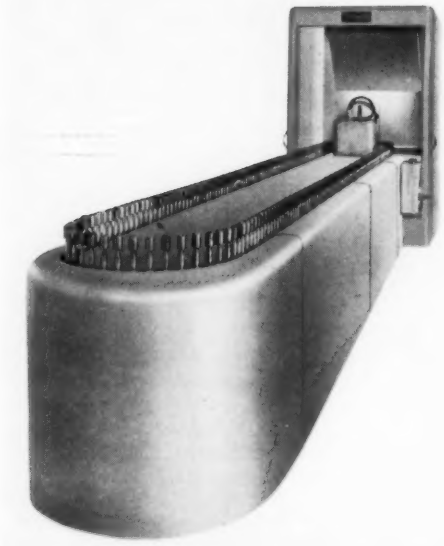
The Chain Conveyor Type carries on from where the Rotary Turntable Type leaves off. It consists of a conveyor chain standing on edge equipped with spindles on which are mounted workholders. It is made in any desired length so work may be loaded where most desirable and conveyed through one or more spray stations, ovens, drying or dehydrating areas and to the unloading stations. On this type as on the rotary turntable type, spray guns are mounted stationary or are made to follow the work while spraying. Workholders are automatically revolved while passing through spray zone or zones. This machine is designed to support the anticipated load, to operate smoothly and economically and can be adapted to a wide variety of coating operations. Production rate of 1000 to 1500 pieces per hour is possible depending upon size of article.

The Cylinder Coating Type machine is of double horizontal chain construction with the chain spaced and equipped with workholders so as to properly hold the cylindrical pieces of work to be coated. As the work reaches the spray zone, its forward travel is halted long enough for moving guns on a separate carriage to move into the cylinders and out again. Spraying takes place as the spray guns are automatically withdrawn. On this type of machine the work does not revolve but the spray guns do. From nine to twelve indexes per minute are possible and since two cylinders are coated at one halt, a production of 1000 to 1400 pieces

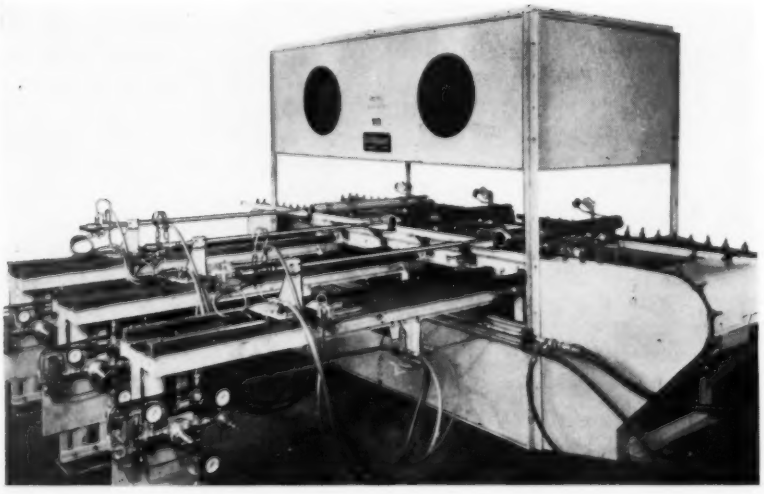


Rotary Turntable Type of Automatic Spray Finishing Machine.

Right: Chain Conveyor Type.



Below: Cylinder Coating Type.



per hour is possible. This machine is compactly built and handles easily what often presents a complicated coating problem.

Transverse moving gun type

Now, let's look at the fourth or Transverse Moving Gun Type. This, without question, is the type which interests every manufacturer or enameler who has production runs of flat ware to coat. Here is a machine which has a wide field of application and universal appeal. While originally designed to coat wall board and leather, necessary modifications were made to meet the requirements of the porcelain enamel industry. It has filled an economical need in that industry in the past and is practically a "must" if the production demand of the present and the future is to be met.

What is this Transverse Coating Machine? It is a machine consisting of supports to hold a track on which a carriage, mounting the required number of guns, moves horizontally across a conveyor laden with ware. An electric motor, through a speed reducer, actuates this carriage at the correct speed to assure even distribution of enamel. Carriage contact to the track is by means of rollers, adjustable to wear. Two or more spray guns of the automatic type are started and shut off by cams at any setting desired so as to cover any part of the conveyor or the full width of it with a minimum of overspray. Carriage drive is by means of a roller chain. Air purifying and regulating devices, material header, air header, and necessary hose for both enamel and air feed to spray guns are also a part of the machine.

Naturally, an exhaust installation is an essential part of such a machine. Since the spray is directed downward, the most logical type of an exhaust would be one that acts downward and then into a dry, or a combination dry and wet chamber.

Combination dry collection and wet reclamation

With spray rooms equipped with replacement air, reclamation of overspray has taken on a new and important significance. Salvaging on a

Installation Photograph Showing Transverse Moving Gun Type of Spray Finishing Machine

scale larger than ever attempted before seems to be in the cards. To make reclamation easy and profitable a new type of spray booth has been developed which adapts itself ideally for use with automatic spraying machines. Reference here is to a combination dry collection and wet reclamation booth. Where a water wash booth for porcelain enamel work is mentioned, the maintenance problem immediately looms up. Ground out pumps plus the continual replacement of worn out nozzles or spuds and piping have been the bane of those responsible for keeping operations going. This new principled water wash booth uses no pump piping and nozzles — in fact has no moving part from the booth entrance to the exhaust outlet except the fan of the blower and its bearing is outside the exhaust duct. Dry reclamation is possible in a larger percentage and that which passes the dry collection chamber is washed out in the wet reclamation chamber. An efficient high collection type exhaust system for use with any automatic spraying machine is an economical requisite.

Since the rate of material consumption is quite heavy — usually four spray guns functioning at one time and in long uninterrupted stretches, the material container should be of ample size to insure continuous maximum production with no delays during operating time for filling.

Conveyors feeding the transverse machine may be either the cable or pin type. When cable type is used, as now seems to be more or less general, a small intermediate cable conveyor of stainless steel is usually inserted underneath the automatic machine. This means a conveyor on which the ware is loaded, transfers the load to the spraying conveyor and it in turn unloads to the one taking it away to other following operations.

A net figure for sprayed ware— 3600 sq. ft. per hour

What is the production possibility of such a machine? This depends on the speed of the conveyor. Conveyor speeds in the past have ranged from 13 to 16 feet per minute but today installations are being made on 20 ft. per minute conveyors. Assuming that a conveyor of 4 ft. width, fully loaded, is traveling 20 ft. per minute, the total area covered amounts to 4800 sq. ft. per hour. Allowing 25% deduction for area lost due to the spacing of ware on conveyor, the actual net figure is reduced to 3600 sq. ft. per hour. Worthwhile production is assured as this figure clearly indicates.

What other advantages are there in the use of this machine? In addition to the production the machine makes possible, all elements entering into a high class finish are controlled. Instead of having air and fluid pressures, spray technique, and the distance between gun and work vary at each spray station, the automatic machine controls these conditions and insures the correct deposit and the desired atomization. The distance between the spray gun and the work, once determined, is set so as to be a constant.

Varying atomizing pressures and various distances from the work will influence the dehydrating process.

to Page 60 →

Right: Paul Cameron, Attorney, Trade Practice Conference Div., Federal Trade Commission was a featured speaker on the NESA program.

Upper left: Harry Brown and Herb Hammar of Federal Electric, Chicago "in conference."

Left: The engaging smile belongs to W. H. McBride, president of McBride Sign Co., Pittsburgh.

FINISHFOTOS

Left: John Ford, manager, Electrical Products Consolidated of Denver registers attention.

Lower left: "Closer please" from the photographer to J. H. Mayne of France Mfg. Co., Cleveland and "Betty" Geraty of the Association staff.

Right: Paragon Electric's William Leff finds a comfortable seat for a conference session.

National electri
hold

MEMBERS of the N.E.S.A. held their annual meeting at the Edgewater Beach Hotel, Chicago, on January 24 and 25. A fine attendance was recorded and representation was from a wide-spread area.

John U. Aull, Swanson-Nunn Electric Company, Evansville, Indiana, brought the group up to date on the activities of the Association and reported a total current membership of seventy-six companies. He in turn introduced the chairmen of the active committees responsible for the various phases of the Association work.

To sponsor advance training courses for key plant men

One of the recommendations of the educational committee, headed by Lewis Carroll, Lackner Company, Cincinnati, was the inauguration of a 40-hour course in the technical as-

Left: D. H. Malcom of Armco's Market Development Division, another featured speaker, discussed steel problems with the sign men.

tri ign association

old hird annual meeting

pects of luminous tube signs. It is planned that the course will cover a one-week period and will be held at the Illinois Institute of Technology, Chicago, with from twenty to thirty plant men enrolled in each class. This forward move on the part of N.E.S.A. includes a plan for defraying all expenses for member representatives except the necessary traveling and living expenses.

A. C. Giles of the Institute presented a suggested outline for the course which is to include discussion periods for the technical subjects covered. Plans call for holding the first course during the summer of 1946, with later courses to be determined by requirements to accommodate all members whose men are enrolled.

Apprenticeship training has also been established by member plants and it was reported that successful

Upper right: John Aull, Swanson-Nunn Electric Co., Evansville, Ind., and retiring president, with Maurice Ely, NESA secretary.

Right: Something must have pleased Ed Lamdin of the National Sign Division of Walker & Co., Detroit.

FINISHFOTOS

Right: A good booster for NESA and the sign industry in general is Dave Swormstedt of "Signs of the Times."

Lower right: Close attention and introspection are registered respectively by Jefferson Electric's R. H. Hoagland and John R. Ford.

Left: Kansas is represented by Max Woodburn of Wichita's Rich Signs Co.

training programs have been launched by individual companies and as community projects.

Of interest to architectural porcelain enamelers

Another recommendation of the educational committee which should be of interest to all producers of architectural porcelain enamel was that data of an educational nature be prepared for distribution to architects, builders and electrical contractors to enable them to make provision for signs in new construction.

The advantage of close cooperation between architects, builders, producers of architectural porcelain enamel and sign manufacturers will be immediately evident. If buildings are to have unity and maximum effectiveness in appearance the necessary signs should be given as careful consideration in their relationship to the complete architectural effect as any other part of the building.

A long list of constructive recommendations by the educational committee included a sign manual to provide basic information on sign construction and plant layout, accounting data for the development of cost information on maintenance work, and a redrafting of the association standards.

H. B. Link, chairman of the Labor Relations Committee, reported that the Brotherhood of Electrical Workers now considers the electrical sign industry as a separate unit in its industrial relations.

Color is considered

A report of the fluorescent tubing color committee, headed by C. A. Pollak, was given by A. C. Barr, General Electric Company, Cleveland. Cooperation in color matching work for fluorescent tubing through the submitting of samples to the Electrical Testing Laboratories was described. There may be a thought here for the sign manufacturers in relation to porcelain enamel colors also.

Maintenance, so important in the sign field, is considered by a committee headed by H. S. Parker, Flashtric Sign Works, Chicago. Recommendations were adopted for the development of practical maintenance data during the current year.

C. B. Burkhart, Electrical Advertising, Inc., Kansas City, reported for the promotional committee. Direct mail work has been sent to large national advertisers, and a folder is now available for individual member's imprint to develop local business. This committee is cooperating with the educational committee in the development of useful information for architects and builders.

Meeting and exhibit planned for July

E. D. Lamdin, Walker & Company, Detroit, chairman of the social and entertainment committee, reported N.E.S.A. plans for a 1946 convention and exhibit to be held at the Stevens Hotel, Chicago, on July 16, 17, and 18. The plans include educational sessions, round table discussions and an exhibit. The announcement of detailed plans will be made in the near future.

Speakers at the meeting were Paul Cameron, Fair Trade Practice Section of the Federal Trade Commission, Washington, D.C., and Donald Malcom, The American Rolling Mill Company, Market Development Division, Middletown, Ohio.

An honorary membership was presented to T. C. Brennan, Consolidated Neon Company, Sydney, Australia. (See news section, *finish.*)

Committee appointments

The following appointments as committee chairmen were made by President Link:

Education: Lewis Carroll; *labor relations:* John U. Aull; *electrical insulation:* W. A. Simpson, Flashtric Sign Works; *fluorescent colors:* C. A. Pollak; *glass standards:* R. N. Lambert, Corning Glass Works; *maintenance and repairs:* Milton Kraus, Broadway Maintenance Corporation; *transformer standards:* Harold Kirn, G. C. Kirn Advertising Sign Co.; *promotional:* C. B. Burkhart; *social and entertainment:* E. D. Lamdin; *executive:* H. B. Link.

This finishfoto was taken at one of the business sessions of the sign association in their meeting room at the Edgewater Beach Hotel.

From the Editor's mail . . .

REPLIES TO "THE *FINISH* LINE"

(Just one little word! Feb. 1946)

The "four-letter word"

Finish:

In the February issue of the *finish* magazine, your editorial on the four letter word was, in our estimation interesting, instructive and commendably handled.

You might be interested to know that as a pioneer in our industry in the use of porcelain enamel steel for the faces of electrical displays we have been careful in our sales training to avoid the use of this word. In enumerating the advantages of the uses of P.E.S., we stress our guarantee against fading and checking. If the four letter word comes up, we can also furnish the proper answer.

We are hopeful that your editorial will receive its deserved result.

HARRY H. BROWN
Federal Electric Company, Inc.
Chicago, Illinois.

The "four-letter word" has been blacklisted

Finish:

I enjoyed your February editorial on the subject of the "four-letter word" that has been black-listed in your working vocabulary—and rightly so!

For some time past now, I have tried also to avoid its use as much as possible and have resorted to substitutes such as you have and have constantly used the expression "impact resistance" instead of "____ resistance".

It is important that everybody in the porcelain enamel industry should grasp the underlying psychology of this suggested terminology. I think it was Oliver Wendell Holmes who first called attention to what he described as "polarized" words—which gather to themselves a meaning beyond what is ascribed to them in the dictionaries. I know of no better example than this word "____" in the sense that it is applied to porcelain enamel. In the minds of a multitude of people — too many, in fact, for our own good — it does not mean an accidental or even occasional occurrence in connection with the usage of a porcelain enamel product, but rather it has become, in many ways, their whole conception of the properties of this material.

I had one chief engineer say to me when I approached him on the use of porcelain enamel, "Porcelain enamel? Oh! That is that material that "_____", isn't it?" While it was said somewhat facetiously, back of it could be sensed the fact that it was his dominant idea of porcelain enamel.

With such people, the word outweighs all the other virtues of porcelain enamel. It is a bad heritage from the past that we must overcome, and I think your editorial is a good starting point. You can rest assured that I am wholeheartedly in accord with you as to the need for avoiding further reference to the word "____".

EDWARD MACKASEK
Porcelain Enamel Institute
Washington, D. C.

SHOULD THE ENAMELERS CLUB ACTIVITIES BE COORDINATED?

(Central club meeting report Feb. 1946)

" . . . there is a basis for national coverage"

Finish:

Congratulations to the Central District Enamelers Club, and to Norm Stolte and his fellow officers for their successful meeting of January 11 marking the return of the club to an active peacetime basis.

Your account of this meeting was most interesting. Having previously expressed to *finish* that there are a number of reasons for combining the several District Enamelers Clubs into a national organization, I was pleased to note that you had offered this suggestion to this group for their consideration. Personally, I feel that this would be a desirable and proper move.

With three active clubs already in the field — Chicago District Enamelers Club, Central District Enamelers Club and Eastern Enamelers Club — there is a basis for national coverage. From all indications the three clubs have similar backgrounds, a common goal and comparable organization setups.

The membership of the clubs is made up of men who are actively engaged in porcelain enameling or in the service of the industry, and includes students, technicians, shop men, supervisors, executives and the sales and service group. These men maintain membership, attend meetings and support the clubs generally because it offers them an opportunity to meet with others having like interests because it offers them an opportunity to meet with others having like interests and experiences. They are interested in the promotion of the porcelain enameling industry and its products. Most of them are dependent on the enameling industry for their livelihood, and know that their prosperity depends upon this industry maintaining its rightful place in the overall picture.

It is not proposed that a strong central organization be set up, but rather an association of active chapters cooperating through an advisory or a planning group made up of representatives from the several district clubs. This group could meet once each year, exchange information, discuss policy and programs, and bring this material back to their respective memberships for their consideration. This opportunity for exchange of ideas, correlation of plans and coordination of effort should strengthen the member groups and make their efforts much more effective.

A central organization could promote and aid groups of enamelers in other localities in the formation of district enamelers clubs. This in turn would advertise the industry and its products.

The members of the Chicago District Enamelers Club feel that the club has justified its existence by offering a medium through which the shop man can present his problems for discussion; by providing an incentive for men with a common interest in the welfare of the porcelain

enameling industry to congregate and become acquainted one with the other; by the information made available to the enamelers through the talks and discussions; and by the publicity obtained for the industry.

Having justified the existence of the Enamelers Clubs, it seems only natural that the groups should avail themselves of every opportunity to improve their position, thereby increasing their value and importance.

It is hoped that this suggestion will be given careful consideration by the clubs that are now active and that an attempt will be made to effect a meeting of representatives of the three groups in the very near future.

W. J. PLANKENHORN
(V. Pres.–Chicago District Enamelers Club)

ARCHITECTURAL ENAMEL AND KITCHEN APPLIANCES

"... with no expense and upkeep"

Finish:

We are doing two lines of service stations for postwar construction, both of them to have porcelain enamel exteriors. I am recommending it because of my experience with the Texaco service stations. These were built several years ago of a variety of materials and those finished in porcelain enamel look as well today as when they were built, with no expense and upkeep. Other materials require a great deal of maintenance work to keep them from deteriorating in appearance.

Also in recent work on kitchen appliances we made a thorough study to discover if there were any finishes which could safely be substituted for porcelain enamel in use where high degrees of heat occur. We were unsuccessful in finding anything but porcelain enamel that would do the job.

WALTER DORWIN TEAGUE
New York City

Finish:

I wonder if it would be possible to obtain three or four extra copies of the January *"finish"*. Your review of the Columbus meeting *(P.E.I. Forum)* was very good and I would like to pass this along to our personnel.

N. H. STOLTE
The Enamel Products Company

Important meetings for enamelers

Central District Enamelers Club to hold March meeting

The Central District Enamelers Club will hold its next meeting at the Hollenden Hotel in Cleveland, Ohio, on Friday, March 29. Following a dinner, officers will be elected for the ensuing year and a program will be presented emphasizing new markets and modern practices in porcelain enameling.

F. C. Woleslagle, Carnegie-Illinois Steel Corp., Pittsburgh, and a member of the Market Research Committee of the Porcelain Enamel Institute, will talk on "Preview of Future Markets for Porcelain Enamel Products."

L. G. Simon, Harshaw Chemical Co., Cleveland, Ohio, will discuss "New Control Instruments and Methods."

Through the courtesy of Ferro Enamel Corporation, Cleveland, a 20-minute sound-slide film will be shown, entitled "Modern Porcelain Enameling." The film, recently completed, was taken in porcelain enameling plants located in various sections of the country.

Reservations for the dinner at the meeting should be made with Acting Secretary William N. Noble, c/o Ferro Enamel Corp., 4150 E. 56th Street, Cleveland 5, Ohio.

Eastern Enamelers Club will meet March ninth

An announcement has just been released to the effect that the next meeting of the Eastern Enamelers Club will be held in Philadelphia on March 9th at the Ritz Carlton. The meeting will be preceded as usual by a luncheon at 1:00 p.m.

The tempo of this meeting promises to equal those of the past, with three carefully selected men scheduled to speak on subjects that are of immediate interest to the entire porcelain enameling industry.

Burton C. Bricker of Du Pont has chosen as his subject "Enamels for Aluminum"; Albert Kellner, export manager of Pemco, who has just returned from a four month's European trip, will discuss "European Enameling Plants"; and Gene Punderson of L. E. Punderson & Son, Cleveland, Ohio, will talk about "Cleaning and Pickling."

The choice of Philadelphia as the city in which this meeting should be held was made as the result of a poll among club members.

Technical Societies Council Production Show

The Chicago Production Show, sponsored by the Chicago Technical Societies Council, will be a "sell out" according to advance indications. The show will be held in the Exhibition Hall of the Stevens Hotel, Chicago, March 20, 21 and 22, concurrently with the Council's Annual Conference.

Porcelain enamel and ceramics will be represented on the Conference program as follows:

. . . . *"Use of Porcelain Enamel for Architectural Purposes,"* by Mark van der Kloet, The Erie Enameling Company; *"Wartime Development of High Temperature Ceramic Coatings and Their Potential Peacetime Uses,"* by Professor D. G. Bennett, University of Illinois; *"The Role of Glass in Architecture,"* by R. E. Miller, Pittsburgh Plate Glass Co.; and *"The Role of Glazed Structural Clay Products in Construction,"* by Vincent Waahlgren of Tilecraft Company.

Registrations are being accepted for the 48 panel sessions which will comprise the Conference. Manufacturers may make advance reservations for the sessions for all or part of their supervisory personnel down to and including foremen. Such requests should go to the headquarters of the Council, 53 West Jackson Blvd., Chicago. Advance registrations for the 3-day Conference are $2 each. Registration fee at the time of the Conference will be $3 per person.

Free tickets of admission to the Production Show may be obtained by any manufacturer by application to Council headquarters or any of the 47 participating societies.

Porcelain Enamel Institute

holds editorial conference

Reported by · Minna Hall Carothers

IN ADDITION to executives and key industry people, an interesting group of about forty editors representing trade and consumer publications attended a conference dinner arranged by the Porcelain Enamel Institute. January 22 was the date, and the locale the St. Regis Hotel, New York City.

The purpose of the dinner was to acquaint editors in all fields in which porcelain enamel might be used with the story of the product, and to lay the groundwork for articles on porcelain enamel during the coming year.

Following a pre-dinner reception, Harold S. Downing of Walker & Downing, Pittsburgh, was chairman of the event. The program was a "brass tacks" one when it came to the question and answer period.

Turk describes institute standards and policies

Richard Turk, P.E.I. president, described the standards and policies of the Institute and extended official greetings to the audience. Mr. Turk stated that the organization includes about sixty members from among the major companies interested in porcelain enamel as a finish. From the statistics available, it is regarded as one of the larger associations, he stated. It is now sixteen years old, and this year's expenditure will be between $80,000 and $90,000. The membership, explained Mr. Turk, is drawn from the basic suppliers of raw materials used through all the various operations — to the manufacturers of finished products. The purpose of the Institute is to promote the scientific, industrial and commercial aspects of the industry and the ultimate objectives to produce more and better products to provide the public with facts needed to intelligently understand this finish, he said — further, to help the public determine when this finish (p.e.) is the product they need.

The three active committees cited by Mr. Turk are: Market Development Committee headed by Raymond Dadisman of The American Rolling Mill Co.; Market Research Committee headed by Robt. J. Ritchey, of Carnegie-Illinois Steel Corporation; and the Products Standards Committee headed by G. H. Spencer-Strong, Pemco Corp. Several groups, stated Mr. Turk, represent the interests of the Institute, namely the table top, sign, jobbing, miscellaneous products, architectural group and others. "Porcelain Enamel," he said, "has improved our lives." Hospital uses were mentioned and other uses from domestic appliances and commercial applications to porcelain enameled caskets and grave markers. In other words, Mr. Turk stated, "porcelain enamel takes care of us from the cradle to the grave."

It was brought out that porcelain enamel did not protect its name in the beginning of its commercial use and paint enamel tried to simulate its merits. No quarrel was had with other products, but the importance of knowing the difference between products expected to last a lifetime and others was stressed. The facilities of the Institute were offered to those present by the Institute president.

Mackasek explains the name

Edward Mackasek, the Institute's managing director, was the next speaker. He explained that the term "porcelain enamel" was forced by the confusion in the minds of most people between enamel, baked enamel or other variations. Porcelain enamel, explained this speaker, is a glass — and the other enamels merely paints. The term "enamel" historically is only applicable to the substance now called "porcelain enamel." The gradual use of the term enamel for other materials made it difficult to establish the name for our product. Mr. Mackasek cited the example of the famous Cellini vase at the Metropolitan Museum of Art, New York City where porcelain enamel was used with burnished gold. "Commercial art, based on utility values in porcelain enamel is still in its infancy" he said.

The modern evolution of porcelain enamel was traced to the period following the Civil War, when slow progress was made — the values that lie in this finish just beginning to be discovered. Universities took up the art of applying this finish and made the information available, stated this speaker, who added that the steel companies were among the first to recognize the potentials in porcelain enamel applied to their output. There was in consequence much expansion in the steel industry.

Refrigerator parts were mentioned as among the first household commodities to which the finish was applied; 1927 saw the first plants where washing machines took advantage of this finish. As a comparison of the growth of the industry, it was pointed out that in 1941 a little over 500 plants existed in 31 states. There is an anticipated expansion of at least 50 per cent during the next five years. A new industry, with new fields to conquer, and great opportunity, is that of porcelain enamel. Prefabricated houses were mentioned as a "natural" for porcelain enamel tile as it could do a job that no other material has been able to do. Hot water tanks of porcelain enamel are now standard equipment. Cooking utensils have been greatly improved. Then there are dish washers, home freezers, air markers, flues, smoke stacks, ships exhausts (where corrosion has been overcome), etc. Railroads have overcome the problem of corrosion through the use of porcelain enamel, stated Mr. Mackasek. The A. O. Smith Corporation is experimenting with porcelain enamel for silos.

Andrews explains increased durability of P.E.

Dr. A. I. Andrews, head of the Department of Ceramic Engineering, University of Illinois, spoke on the technical aspects of the last 15 years in the porcelain enamel industry, and referred with pride to his associate editorship of "*finish*." He

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ANOTHER HARSHAW DEVELOPMENT FOR BETTER PLATING

NEW SINGLE NICKEL SALTS
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NOT A POWDER

This photograph, at ten times magnification, shows the uniformity of crystal size.

A unique process, developed by Harshaw, now makes it possible to produce single nickel salts as small definite crystals of carefully controlled size. Advantages, when compared with the larger crystals formerly produced, are numerous.

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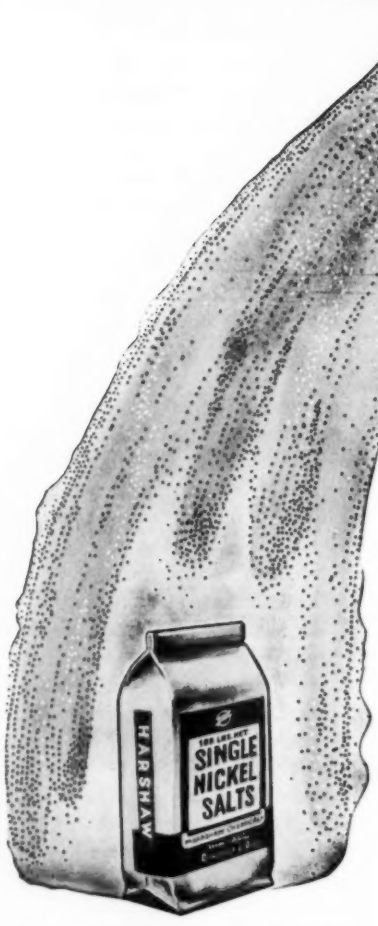

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BRANCHES IN PRINCIPAL CITIES

"Main Street" will modernize

case history of a typical "main street" shows the part architectural porcelain enamel can play in commercial modernization and what business men think of the material

By Dana Chase • EDITOR

Exclusive feature finish

The "Main Street" of our story is the principal thoroughfare of a beautiful residential city of 16,000 population. The street is York Street, and the city is Elmhurst, Illinois. Elmhurst celebrated its 100th birthday in 1936. Like hundreds of other towns and cities, it has grown from a tiny settlement of less than a dozen families — and during its growth has been beset by all of the "growing pains" that are inherent in such a transition.

Elmhurst is known for its stately elm trees which beautify its streets and for which the town was named—or it might be known as a town that always votes republican, overwhelmingly. Its business section might be considered typical of the business section of any town or city of comparable size and with a history of one hundred years or more. Mud roads have long since given way to modern streets and the "iron horse" of the West Coast trains, whose tracks bisect the city, is fast giving way to the mighty diesels, but with all this Elmhurst still has one frame blacksmith shop standing on "Main Street."

One logical reason for selecting Elmhurst as the background for our story is the fact that it *is* fairly typical of many cities and towns whose principal business streets do more to picture the history of the town than to present it as a modern, up-to-date and thriving business district. As we walk up York Street we see the towers and other features typical of the region's architecture during the period of the town's early history. Most of these buildings now house some business enterprise necessary to serve the 16,000 residents.

Another reason for choosing York Street is that it offers four typical examples of architectural modernization and that these examples, representing four diversified businesses, are all in architectural porcelain enamel. Let's take a walk north on York Street.

H. C. Hesse & Company (men's wear) is our first stop. Here we find an exceedingly attractive front in the colors of warm sand and dark red, just a shade lighter than maroon. Channel letters in the same shade of red serve as a lighting source to flood the front with color. This front of Maul Macotta was installed in 1942.

In contacting owner Hesse, who is currently vacationing in Florida, we received this report:

"We wouldn't have rented the store under any condition as it was. It was a two-story building of obsolete design and over forty years old. It had a stairway from the sidewalk to the second floor, and it was formerly used as a bakery with flats above. Through slight alterations in the building proper, and the installation of the porcelain enameled store front, it was made suitable for our occupancy.

"We were fortunate in that the new front was installed just before priorities came in, and our business in this location has 'boomed' ever since. The front has proved to be a definite drawing card for business. While it is impossible to make accurate comparisons due to the effect of war conditions, we feel that we have one of the most effective fronts on our street, and know that it has had an appreciable effect on our business volume.

"There have been no repairs whatsoever — as a matter of fact, I can not remember when we have even washed the top section of the front. The rain seems to clean it for us."

Chipain's (fruit and liquor store) is our next stop. Here is an outstanding example of transformation from an "impossible" to an attractive small-store front that invites customers. Color is light ivory with maroon bulkheads, and decorative lines in vermillion. Oak Park architects, Hotchkiss & Bird, designed the front. The general contractor was Frank Vertovek, and the architectural porcelain enamel was installed by Porcelain Products.

In referring to this porcelain enameled store front which was installed in April of 1937, Mr. C. G. Chipain, owner of the store, said:

"The front *made* our business. Volume tripled the first week following its installation and developed to ten times our previous average volume.

"It's little wonder, as the new installation changed a 'shack' into an inviting store. The front was formerly of frame and set back several feet from the building line, with frame steps leading to the store proper. The installation has paid for itself many times over, and while near-by stores veneered with other materials have had repeated repairs, ours looks the same as the day it was installed."

The York Theatre provides the "great white way" on York Street. An important "pull" for capacity audiences is represented in the mod-

Modern Faces...

ON MAIN STREET

This typical main street contrasts the architecture of another day with modern building faces. Soon there will be many new faces on "main street."

A SUB-ZERO Sunday morning in December, '45, finds frost blocking our view of store interiors. In sub-zero cold or in July heat, the porcelain enameled exteriors remain the same.

CHIPAIN'S — "Volume tripled the first week . . . and developed to ten times our previous average volume."

HE YORK THEATRE — "The front was the outtanding move in bringing our theatre up to ate. We feel it is now the 'bright spot' of York Street."

H. C. HESSE & CO. — "We wouldn't have rented the store under any condition as it was . . . The front has proved to be a definite drawing card for business."

MORRELL'S — "The material is eminently satisfactory—attractive, modern and, most important of all, it requires no upkeep of any kind . . . has proved to be everything that we expected, and more."

ern front which combines the liberal use of architectural porcelain, stainless steel and well designed lighting effects. Principal background color is light ivory. The front is effectively illuminated with maroon porcelain enameled applied channels which serve both as an architectural motif and as an indirect lighting source.

The design is by architect Roy B. Blass of Chicago and Wilmette. Architectural porcelain enamel was manufactured and installed by Porcelain Products, and signs and lighting by Whiteway Electric Sign and Maintenance Company.

When asked to comment on the installation R. L. Staab, York Theatre manager, said:

"It does the job. The most important point in favor of porcelain enamel is that it is easy to keep clean. All of the front is porcelain enamel and stainless steel except the canopy. We have painted the canopy about every two years since its installation in the summer of 1938, but the porcelain enameled surfaces require no special attention. We do wash it down about every six months to maintain its maximum brilliance.

"The new front was the outstanding move in bringing our theatre up to date. We feel it is now the 'bright spot' of York Street.

"As a constructive suggestion, I believe that if the entire exterior of a theatre such as ours were to be covered with porcelain enamel or porcelain enamel and stainless steel in combination, *including the canopy or marquee*, the theatre owner could say goodby to the nuisance of painting and would have no upkeep except the necessary replacement of lamps and neon tubing."

Compare this "before" picture of the York Theatre with the "after" picture on page 30. If old pictures were available for the Chipain and Hesse stores the contrast would be far more outstanding.

Morrell's Finer Cleaning has as an Elmhurst sales room and distribution point an especially designed small building with adjoining parking space. After a walk of a block or two from our last stop, we see this all-porcelain enameled building of modern design. The exterior is of two-tone porcelain enamel, buff with light ivory stipple, the surface of which has a definite "texture" effect. A progressive young Elmhurst architect, Edgar Hanebuth (now in the armed services), designed the structure to meet the specialized needs of the owner. General contractor was Frevol-Smedberg of Chicago. Architectural porcelain is the product of General Porcelain Enameling and Manufacturing Company, and was installed by Mielke System in early 1942.

In an interview Mr. John Morrell said:

"The material is eminently satisfactory — attractive, modern and, most important of all, it requires no upkeep of any kind. I liked the idea from the time the building was first designed and our small store in Elmhurst has proved to be everything that we expected, and more.

"Our plants in Elgin and Bloomington are both stone buildings, but we have purchased a site in Aurora for a new plant 70 ft. by 150 ft., and porcelain enamel will be used throughout in its construction."

York Street and all other "main streets" throughout the country represent a modernization potential that defies accurate calculation. Architectural porcelain enamel now has innumerable examples of attractive and business-getting commercial installations that have proved their effectiveness to architects, contractors, realtors and store owners. The next few years will see a big change in the "Main Streets" of America, and architectural porcelain enamel will play an important part in the modernization program.

The Washington round-up

By Wilfrid Redmond

Steady progress has been made in the production of consumer durable goods in spite of work stoppages and materials shortages. Production of refrigerators, electric ranges, washing machines, electric irons and vacuum cleaners is still far below earlier expectations and considerably under pre-war levels, but with the early settlement of wage disputes, most of these items should reach the pre-war rate by June. However, the Civilian Production Administration points out that pre-war levels represent only a measuring-stick, and do not reflect the backlog of today.

CPA reported recently that we need far more goods now than in any pre-war year to satisfy demand and to maintain full production and employment and that we are not getting them fast enough.

In addition to work stoppages, the shortages of such materials as steel sheets and castings, and uncertainties as to wage-cost factors, there is the necessity of filling distributor pipe lines. These pipe lines have been greatly extended by a substantial increase in the number of dealers over pre-war outlets. This also is an important factor in retarding the flow of consumer durables to the consumer.

Refrigerators

Shipments of domestic mechanical refrigerators in December increased 30 per cent over November to an estimated level of 150,000, CPA reported. This is about one-half of the pre-war rate of 309,000 per month. Production has been held back by difficulty in getting such components as steel, motors, and compressor units. If the present rate of increase can be maintained, pre-war levels should be reached by June.

Washing machines

Production of domestic washing machines and ironers should reach pre-war levels by June. Factors limiting current production are insufficient steel sheet for porcelain enameling, castings, and work stoppages.

The castings situation is reflected in a recent government report on the malleable castings industry. The production of 44 of the 115 foundries operating in the U. S. is currently 24,555 tons per month. But the backlog of the automobile industry alone at these foundries is 41,923 tons. The backlog for refrigerators is only 187 tons and for ironing machine parts 220 tons, but most of the foundries are 12 weeks behind in their shipping schedules.

Steel producers say they can get back into full production within a week or two after the strike but CPA will not lift the strike-time controls immediately. The reconversion agency estimates six weeks for a return to normal operation, and the priority ratings that were suspended during the strike will probably not be reinstated right away.

Steel production must average 86 per cent of capacity in 1946 if the 61,000,000 product tons needed to meet the projected demands of the steel-consuming industries are to be produced. Certain products, such as sheet and strip will be particularly tight.

Pig iron production today is not sufficient to meet the mounting demand for bathtubs and for steel to produce consumer durables. In order to meet the expanded demand there must be further increases. CPA is currently conducting intensive studies to meet such bottlenecks in the future production program.

Bathtubs

About 110,000 bathtubs were produced in the last quarter of 1945, as compared with a normal annual production of about 1,250,000. Production must be more than doubled over the current rate if estimated 1946 requirements of 1,000,000 tubs are to be met. Capacity for steel tub production in 1946 is expected to be more than 200,000 tubs.

In a recent survey of producers it was found that the 1946 production goal can be met if adequate supplies of pig iron, scrap and sheet steel are available. CPA says that such steps as may be necessary will be taken to assure the production of bathtubs at the necessary levels.

Housing

The new Veterans Emergency Housing program calls for construction of 2,700,000 homes during 1946-47 of which 1,200,000 will be started this year. It is estimated that about $2 billion worth of building materials will be needed for the 1946 program and $3,250,000,000 for 1947.

Housing Expediter Wilson W. Wyatt, who announced the program, revealed that the Government will recommend the expenditure of about $600,000,000 to encourage the production of materials for this emergency housing. About 400,000,000 will be spent to hasten production of conventional materials. Wyatt recommended that this subsidy should include the underwriting of overtime production. About $200,000,000 will be spent for the development and production of new materials. The initial announcement did not explain how the subsidy would be applied.

President Truman has endorsed the Wyatt housing program and legislation to effectuate it is expected to see speedy enactment by the Congress.

Chemicals

The Civilian Production Administration reports that antimony oxide for ceramic use is in plentiful supply with no forseeable shortage. Antimony ores and metals are short, but inventories of oxide were built up during the war for Army and Navy use and are now taking care of all civilian production demands. There is plenty of excess capacity for production if required.

A shortage of lead is indicated in the second and subsequent quarters of 1946 unless domestic production reaches new high levels and imports are increased. At present, lead production is curtailed by strikes in Utah and imports almost cut off by strikes in Mexico. It is estimated that

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Here's why we Emphasize

THE Verson ALLSTEEL WELDED FRAME

...you gain these benefits:

- Cleaner Stampings
- More Uniformly Drawn Sections
- Greater Accuracy
- Greater Press Life
- Longer Die Life

because

The Verson Allsteel Welded Frame Is Inherently Stronger—Offers Maximum Resistance to Deflection

The Verson Allsteel Welded Frame has inherently greater strength and resistance to deflection because of the greater tensile strength and higher modulus of elasticity of steel plate. [See graph below]. Further, steel is a homogeneous material, free from defects.

Maximum Resistance to Torque

Another important advantage of the Verson Allsteel Welded Frame is its resistance to torsionial twist caused by off-center loads. Of special box-type construction, developed by Verson through two decades of relentless experiment and testing, Verson Allsteel fabricated frames provide a heavy inner load-carrying plate, and a lighter outside plate which offers maximum resistance to lateral deflection and torque. In other words, Verson Allsteel Welded Construction permits the placement of metal where it will provide peak strength, rigidity and endurance.

Strength + Rigidity = Accuracy

Thus, the vital factors in a press frame are strength and rigidity, for they determine press accuracy and the quality of work a given press will produce. Verson Allsteel Welded Frame construction, it has been demonstrated, provides maximum strength and rigidity; consequently, cleaner stampings, more uniformly drawn sections, longer die life and greater press life.

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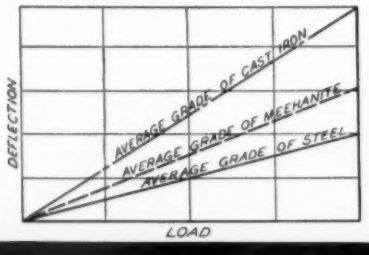
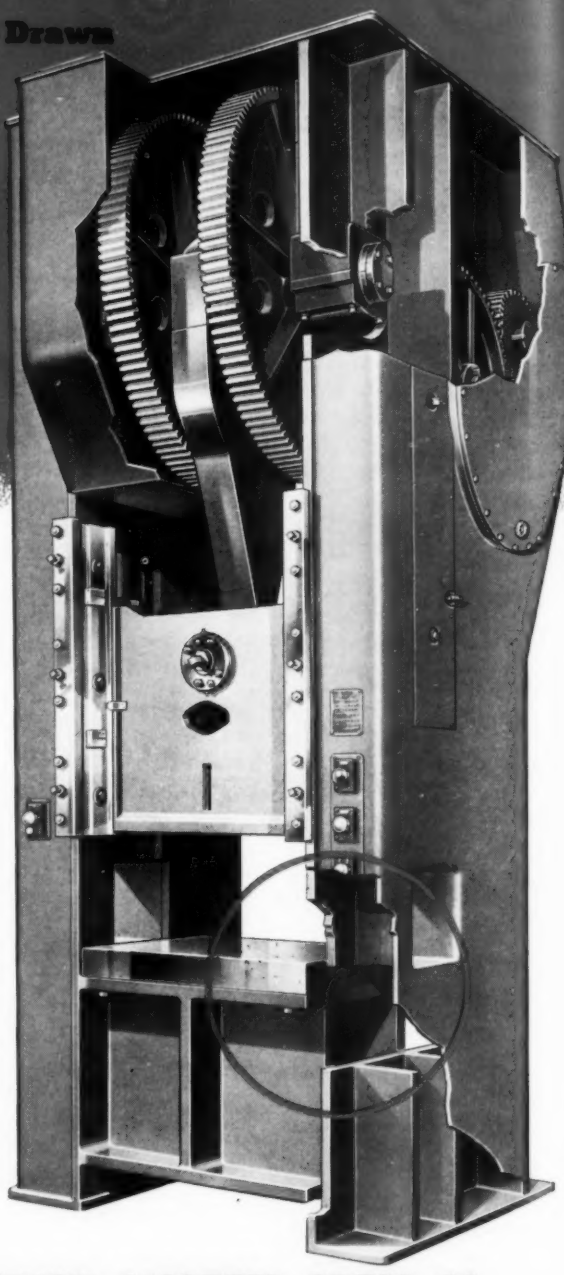
Verson Presses are built by the originator of all steel welded press construction. They are backed by more than 25 years of successful press engineering . . . ask a Verson engineer to call and go over your press requirements with you.



Comparison of Deflection in Steel, High-strength Cast Iron, and Average Grade of Cast Iron Beams of Identical Section



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NEWS

New company to produce enamelware in Mexico

Industrial Jones de Mexico S.A. is the name of a recently formed company for the production of enamelware in Mexico, with operations scheduled to begin about August of this year.

Chief production of the company will be kitchenware and hospitalware with approximately one-third of production capacity unassigned pending further market analysis.

Personnel of the company includes Frank E. Jones, vice president in charge of operations; Benjamin H. Firth, plant superintendent; and James J. Theodore, ceramic engineer. Mr. Jones who is president of Jones Metal Products Co., West Lafayette, Ohio, is financially interested in the newly formed company. Mr. Firth was formerly with International Electric, and more recently served as chief of Electrical Appliance Section on the War Production Board. "Jim" Theodore was formerly with Pemco Corporation.

Craven returns to Pemco

Pemco Corporation has just announced the return of Capt. Henry E. Craven as plant superintendent. In 1932 Capt. Craven graduated from the University of North Carolina with a degree in Ceramic Engineering. Immediately following graduation he joined Pemco as a ceramic engineer in the Control Department and at the outbreak of the war he had advanced to the position of plant superintendent.

Craven enlisted in the Chemical Warfare Service and was sent to CWS Laboratories of Columbia University for research work. From New York he was transferred to the Engineering Division of the Technical Command at Edgewood Arsenal and remained there until his discharge.

Hoenigmann resigns executive post at Cribben and Sexton

George D. Wilkinson, president of Cribben and Sexton Company, has announced the resignation of F. J. Hoenigmann, executive vice president and general manager.

"The benefits of his experience and guidance have had a far-reaching good effect upon our organization; and it is, of course, with regret that I must announce this termination," Mr. Wilkinson stated.

Mr. Hoenigmann, a graduate engineer of the University of California, Class of 1916, served in World War I as a First Lieutenant and Aide-de-Camp to General Hugh S. ("Iron Pants") Johnson. After the war he went with General Johnson to the Moline Plow Company, Moline, Illinois, where, during ten years of service in various positions, he became general superintendent works manager.

In 1930 he became identified with the gas industry when he joined Cribben and Sexton Company as sales manager. In 1940 he was made vice president and general manager.

Hoenigmann was formerly a member of the American Gas Association's Executive Board. He is now chairman of the Gas Range Division, and a director of G.A.M.A.

Frank plans to enjoy a well earned vacation with his family. His future plans beyond that brief period are as yet unannounced.

Davis back with O. Hommel

Lt. Col. Shipp Davis has recently been released from the service and has resumed his former position with the sales organization of the O. Hommel Company of Pittsburgh.

Shipp will be porcelain enamel frit sales representative in the southern part of the United States.

Brown Instrument school in progress

The new industrial instrument maintenance and repair course of the Brown School of Instrumentation got under way February 18, and will continue to May 22.

This course, second of the 1945-46 season, will conclude the 11th year the school has been conducted by the Brown Instrument Company, Philadelphia industrial division of Minneapolis-Honeywell Regulator Company.

The course places special emphasis on the company's new electronic instruments including improved models that have been announced or are being developed.

Other studies will stress millivoltmeter type pyrometers, mechanical potentiometer pyrometers, electrically operated automatic controls, flow meters, thermometers, pressure gauges, hygrometers, air-operated automatic controls, Moist-o-Graphs, CO_2

and analygraph and resistance thermometers and tachometers. Studies include laboratory practice and lectures followed by final examinations.

Mullins introduces the "Free American Way"

A sound-slide film entitled "Free American Way," has been produced by Mullins Manufacturing Corporation, Salem, Ohio, to show how American industry can meet the challenge of changing times.

The film presents the story of American initiative and enterprise and uses the experiences of the company for concrete examples. It contends that the future growth of America lies in recapturing the fundamentals upon which the nation was built — hard work and freedom of enterprise. The basic idea that if men and money are kept busy there can be no slack in the belt of the economic machine is pointed out, as is the fact that if men and money are working there is neither time nor need for economic meddling.

A program enlisting the aid and cooperation of industry, labor and government is suggested.

The film, for use on standard 35 mm. sound-slide projectors, is available to any group wishing to show it. Write to Mullins, Salem, Ohio.

Pemco Honor Society holds dinner

The Pemco Honor Service Society of the Pemco Corporation of Baltimore has as its membership those men and women who have been with Pemco five or more years. It has been customary to give a dinner to this group each year for the purpose of presenting to those eligible a suitably engraved "key" designating their length of service (in periods of five years), the first key being presented at the end of ten years of service. The "service" of the Society has now reached the grand total of more than 635 years. At this year's dinner ten members were presented with keys indicating 197 years of association with the company.

Richard Turk, executive vice president of the company, said, "While it has been impossible to hold the dinner with any degree of regularity during the war years, I hope that from now on each year will bring new members into the Society and that there will be no further breaks in the schedule." He also said it gave him a great deal of pleasure to state that of the 160 Pemco employees who entered the service all came through without serious injury.

Russell Greer, vice president, presented Karl Turk, Sr., oldest member of the Society and president of the company, who in turn distributed the gifts and emblems.

Highlighting the presentation was the gift of a beautiful gold watch to Anthony Dietz for his *twenty-six years* of service.

Anthony Dietz (right) receives gold watch from Karl Turk, Sr., for his twenty-six years of service.

ACS Pittsburgh Section — March meeting

The regular monthly meeting of the Pittsburgh Section of the American Ceramic Society will be held Tuesday, March 12.

A dinner meeting is planned at the University Club for 6:15. Those unable to attend the dinner are invited to be present for the meeting scheduled for 8:00 P.M. Wives and friends of members are cordially invited.

It will be National Society Night, and the program is being planned as a tribute to the Officers of the National Society. C. Forrest Tefft, president; J. E. Hansen, vice president; J. D. Sullivan, treasurer; R. C. Purdy, secretary; E. H. Fritz, past president; C. E. Bales, past president; and Charles S. Pearce, associate secretary, are all planning to be present.

Feature speaker of the evening will be Ross Purdy in a talk entitled "Organized Promotion of Ceramic Education and Research." An unusual program is promised by the committee headed by Harold Simpson.

New York ACS section holds second meeting

On January 23 the second meeting of the New York Metropolitan Section of the American Ceramic Society was held in the Building Trades and Employers Association Building in New York City, with 89 in attendance.

Speakers of the evening were Dr. Ralston Russell, Jr., director of Ceramic Research at Westinghouse Research Laboratories in East Pittsburgh, Pa., and Rexford Newcomb, Jr., ceramic engineer for Brickseal Refractory Company in Hoboken, New Jersey.

The formation of two new committees — Membership Committee

and By-Laws and Rules Committee — was announced. Membership of these two groups are: *Membership Committee* — Chairman, Don P. Falconer, F. E. Schundler & Co. Inc.; R. H. Sherwood, United Feldspar & Minerals Corp.; C. G. Fels, Seaboard Refractories; and C. L. Norton, Jr., Babcock & Wilcox Co. *By-Laws and Rules Committee* — Chairman, J. C. Crawford, Johns-Manville Corp.; Emerson W. Emrich, R. T. Vanderbilt Labs; M. H. Pickard, Pacific Coast Borax Co.; and S. D. Swan, Dentists' Supply Company.

PEI Architectural Division to adopt standard specifications

Twenty-two representatives from organizations interested in the design, production and installation of architectural porcelain enamel met in Cleveland on January 16 to discuss the Division's current problems.

H. R. Spencer, Division chairman, emphasized the need for establishing high standards of quality as the basis for progress. It is the duty of the industry, he pointed out, to set up specifications that will guard the architect, the specifications writer, and the user of porcelain enamel against the substitution of inferior material.

Specifications that had been prepared previously by a Specification Committee were discussed, together with specifications recommended by the Product Standards Committee. Revisions were suggested, and the Specifications Committee was then instructed to develop a unified set that could be adopted as the standard specifications of the Architectural Division. Services of a qualified architectural specifications writer will be procured to aid in this work.

A "quality label", which will be used by the members of the Division to identify architectural porcelain enamel made in accordance with adopted Porcelain Enamel Institute standards, is to be developed as a project of the P.E.I. Market Development Committee. Colorful literature on architectural porcelain is in the final planning stages by this committee. Members who have good photographs of outstanding installations are urged by the committee to submit them to the P.E.I. advertising council, Walker & Downing, Oliver Building, Pittsburgh, Pa.

All accruals on the outstanding Preferred Class A $5 stock of the Conlon Corporation, Chicago, maker of household washers and ironers, amounting in some cases to $19 per share, have been voted paid, according to a recent announcement by Bernard J. Hank, president and chairman of the board of directors.

D. B. Walters (Jr.) joins finish staff

finishfoto

The publisher of *finish* is pleased to announce the appointment of D. B. (Bud) Walters to the publication staff following his discharge as a Captain in the Army, where he served for a period of five years. Walters is a son of the late D. B. (Dur) Walters, former vice president and general manager of Chicago Vitreous Enamel Product Co.

"Bud" is a graduate of the University of Illinois with a B. S. degree. Following graduation he joined the Army in 1941 and was assigned to the Medical Department at Camp Grant where he served for eighteen months. He then attended the Anti Aircraft Officer Candidate School at Camp Davis. Following a long tour of training duty in the United States, he was ordered to Greenland with the 424th AAA Battalion. He spent one full year in Greenland as a platoon leader and battery commander (See "A Letter from Greenland" in March 1945 *finish.*)

Following the fortunes of war the organization was returned to the States and converted to the Infantry. He was then assigned to the Transportation Corps for duty as Transport Service Officer aboard the U. S. Army Transport "U.S. Victory" where he served until the start of his terminal leave.

Our latest addition to the organization already has his sleeves rolled up and is tackling the problems of production incident to the publication of a monthly trade journal. As the occasion arises for editorial expression, we believe you will enjoy his free writing style and natural wit. Yes, he is a "photo bug" too.

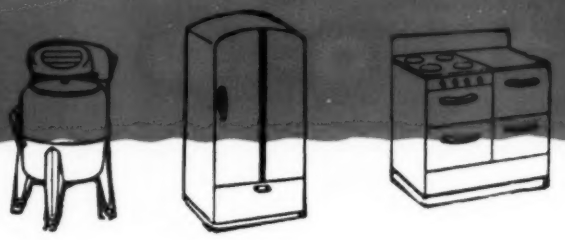
Mr. and Mrs. Walters (the former Jane Hubbard of Indianapolis) will take up permanent residence in Chicago when, as and if another of Chicago's young couples moves away and leaves a vacant apartment.

Brown will complete purchase of $500,000 in equipment in 1946

Installation of $500,000 in new manufacturing, processing and development equipment, started in 1945, will be completed this year, accord-

Reduces manufacturing costs . . .

NEUTRALTONE



keeps the color-tone of all parts uniform

Uniform color-tone of white enameled parts need not be a constant production problem. The increased use of antimony free white frits by enamelers has accentuated the uniform color-tone problem and the O. Hommel Company has developed Neutraltone as the answer.

Uniform color-tone of white enameled parts is essential to give your product the sales appeal customers want. Off color tones caused by a difference in spray weights are practically eliminated and reoperated pieces do not change in shade or color value.

Neutraltone will work readily with all white cover coat frits (regular and acid resist).

Neutraltone is superior and easier to use than any other product for obtaining a uniform tone on all enameled parts.

Neutraltone makes white enamels whiter and completely removes the "off-tone" so frequently found in white frit.

It does not effect the workability of frit and in no way harms it.

Neutraltone is inexpensive to use.

Laboratory Controlled Production of Ceramic Supplies

O. HOMMEL CO.

PITTSBURGH 30, PENNA.

Pacific Coast Agents
L. H. BUTCHER CO.

- FRIT for Steel, Cast Iron or Pottery
- CERAMIC COLORS
- CHEMICALS
- BRONZE POWDERS
- METAL POWDERS
- SUPPLIES
- EQUIPMENT

Our Technical Staff and Samples are available to you without obligation. Let us help you with your problems.

ARMY NAVY

World's Most Complete Ceramic Supplier

ing to Henry F. Dever, president of Brown Instrument Company, Philadelphia industrial instrument division of Minneapolis-Honeywell Regulator Company.

During the past year, said Mr. Dever, the company acquired and installed $250,000 in new and modern machine tool equipment, constituting, he added, part of the recently announced overall expansion plan of the entire Honeywell organization. The Philadelphia division will retain additional branch sites, acquired during war years, it was added, and will make other organizational changes for greater worker comfort and operational efficiency.

O. Hommel sales representative

R. C. Smith is now associated with the O. Hommel Company as sales representative — Southern Territory.

Mr. Smith started in the ceramic industry as a laboratory technician with Pemco in 1937. He went from there to the Chattanooga Stamping and Enameling Company where he worked in the mill room and laboratory. His next connection was with Phillips and Buttorff as control man. He also served in the same capacity with Cavalier Corporation in Chattanooga. Smith was also connected with Republic Steel Corp. in Gadsden, Alabama, and worked for Consolidated Vultee Aircraft during the war.

A report comes from Howard Moad, former advertising manager at Chicago Vitreous Enamel Product Company and editor of "Better Enameling," that he is no longer connected with the company. He has not as yet announced his future plans.

Westinghouse elects new president

The Westinghouse Electric Corporation has announced the election of Gwilym A. Price as president, succeeding George H. Bucher, who has resigned from that office. Under a recent amendment of the Corporation's bylaws, Mr. Price as president will be the chief executive officer.

A. W. Robertson, who as chairman has been the Corporation's chief executive officer since 1929, has reached retirement age. He was elected chairman of the Westinghouse Board of Directors under the new bylaws and will continue as a member of the Westinghouse organization in a less active capacity.

Mr. Bucher was elected vice chairman of the Board of Directors and will continue to serve as chairman of the Westinghouse Electric International Company, which handles all export business of the parent company, and will have other active duties.

Philco opens training school for export service managers

Thirty Philco export service managers, from all parts of the world, are in Philadelphia attending Philco International Corporation's two month training school in the servicing of refrigerators, air-conditioners, radio and television receiving sets and other products, it was announced by Dempster McIntosh, president of Philco International.

The refresher course for these distributor service men has brought them from such far away places as Peru, Iceland, Netherlands West Indies, New Zealand and Bolivia. Knowledge gained during their two months here will be taken back to the home country and imparted to the many dealer service men.

During the war Philco trained over 15,000 men for the Army and Navy in radio and radar. Many of the men who were key instructors in the wartime training program are serving as teachers for the export service managers.

Florence Stove elects new president

Eugene Holland has resigned as president and director of Florence Stove Company effective January 31, and R. L. Fowler, present chairman of the board, has been elected president to succeed Mr. Holland.

Mr. Fowler served as president of Florence Stove Company from 1931 to April 1945, at which time he was elected chairman of the board. He will continue to serve as chairman of the board as well as president of the company.

R & M opens New York office

R. S. Agee, vice president of Roberts & Mander Stove Co., announced the opening of a new factory branch office and showroom at 1 Park Avenue, New York City, to be under

the direction of John H. Emery, newly appointed district manager for Metropolitan and New York State areas. Modern kitchens and "Quality" ranges will be on display in the showroom, which will also serve as a training center for utility and dealer sales and service personnel. Sales of R. & M. products for new construction and apartment house modernization in the Metropolitan area will also be directed by Mr. Emery from this new branch office, the report states.

New advertising manager and editor at Chicago Vitreous

Announcement comes from Chicago Vitreous Enamel Product Company that Albert B. Friedmann has been made advertising manager and editor of "Better Enameling."

Mr. Friedmann attended the University of Chicago and Northwestern University, majoring in advertising and business administration. From 1937 to 1940 he was associated with an industrial advertising agency in Chicago. In 1940 he joined the Chicago Black Horse Troop for a year's training. This developed into five years and three months of active duty by the time he was separated from the service on January 15, 1946. He earned his commission in the Quartermaster Corps, was subsequently promoted to the grade of Captain, and now holds a reserve commission.

New line of cooking utensils introduced

The accompanying illustration shows a few items in the newly designed line of porcelain enameled cooking utensils manufactured by The Moore Enameling and Manufacturing Company, West Lafayette, Ohio. Of the cooking utensils displayed at the Housewares Shows and Marts there were few that indicated a new trend in styling or construction. This represents the first information that has come to *finish* relative to trends for the future.

This new Moore line is in gleaming white with black trim, and has ebony black covers with white knobs. The covers are vented to prevent boiling over. Top stove items have fuel-saving black bottoms and edges — the black bottoms for heat conductivity and the black edges for maximum durability. The utensils are represented as being impervious to fruit acid and stain attack.

General Mills man to Brand Names Research Foundation

Appointment of Harrison F. Anderson, former director of public relations of General Mills, Inc., to the newly created post of director of informational services of the Brand Names Research Foundation, Inc., was announced by Henry E. Abt, BNRF managing director.

"Expanded activities of the Foundation and increased demands for its services make necessary expansion of our staff," Mr. Abt said. "Appointments to other posts may be expected soon."

The Brand Names Research Foundation, Inc., is a non-profit corporation chartered in the State of New York and is supported by manufacturers, advertising agencies, and publishers interested in the factual study of the distribution system.

Bob Weaver gets editorial recognition as a civic leader

Friends of R. A. (Bob) Weaver, president of Ferro Enamel Corp., Cleveland, who live outside the Cleveland area will be interested in the recent editorial recognition given him by a leading Cleveland newspaper. A lengthy editorial appeared in a recent issue of the "Cleveland Press" under the heading of "Bob Weaver — A Good Leader." We quote in part from the editorial:

to Page 42 →

BOXES and CRATES

All Types of Wooden Packages

★

HINGE CORNER

NAILED CRATES

WIREBOUND

PLYWOOD

SHOP and TOTE BOXES

★

CHICAGO MILL AND LUMBER COMPANY

111 W. Washington Street Chicago 2, Illinois

→ *from Page 40*

" . . . Bob Weaver of Ferro Enamel has been devoting a substantial part of his time in recent years to community leadership. It is good for Cleveland that he has done so. He is not only an excellent industrial leader, the operator of a highly successful business, but has the resilient qualities of a man who doesn't linger too long worrying about things he can do little about — things that are inherent in the change through which the world is going. He studies conditions, applies himself to the trends and currents, and makes his decisions realistically on the basis of what he thinks today and tomorrow are likely to bring.

"For these reasons we are pleased to see Bob Weaver take over an important civic responsibility, the leadership of the Red Cross campaign . . .

"We hope that it will be possible for him to take on more civic responsibilities as time moves along . . . "

"Deluxe Porcelain" Frigidaire is displayed before G. M. Overseas Operations representatives

R. Rubino of GM Overseas Operations in New York City and J. A. Russel, assistant general manager, GM Overseas Operations, Port Elizabeth, South Africa, inspect a deluxe porcelain enameled Frigidaire.

The deluxe porcelain Frigidaire refrigerator, DPI-7, came in for considerable attention during a five day sales school conducted by the Frigidaire Division, General Motors Corporation in Dayton, Ohio for key representatives of General Motors Overseas Operations. This school, wherein the representatives were appraised of the latest Frigidaire engineering, production, advertising, sales and distribution developments, is the first step in Frigidaire's program for rebuilding prewar distribution organization.

Approximately 40 representatives of GM Overseas Operations attended the school from such headquarters as Denmark, New Zealand, Sweden, Uruguay, Belgium, South Africa, Argentina, Switzerland, Brazil, Peru, England, Cuba, India, Mexico and the main office in New York City.

Among the speakers on the five day program were E. R. Godfrey, general manager; P. M. Bratten, general sales manager; S. M. Schweller, chief engineer; and L. A. Clark and H. F. Lehman, assistant general managers.

It is reported that J. W. Stigall has been appointed sales manager of the Launderall Department at F. L. Jacobs Company, Detroit manufacturers of household appliances.

Robert H. Roden, former sales manager, is no longer with the company.

Cribben and Sexton announces engineering appointments

The appointment of Dr. Frederick Port as chief engineer for Cribben and Sexton Company, Chicago, has been announced.

Dr. Port received his Bachelor of Science degree in Chemical Engineering at the University of Illinois. In 1936 he attended M.I.T. as Staff Member and graudate student, and was granted the degree of Doctor of Science in Chemical Engineering in 1939.

From 1939 to 1942 Dr. Port was associated with the Republic Steel Corporation in Chicago as head of the Combustion Engineering Department.

In 1942 he entered the army as Ordnance Officer in procurement work. He was successively, Resident Ordnance Engineer at the Studebaker Corporation, Officer - in - Charge of Studebaker Proving Ground, and Assistant Chief of Tank and Automotive Purchasing in the Chicago Ordnance District. His army rank was Captain.

Charles L. Turner joined the Engineering Department at Cribben and Sexton as research engineer on February 1.

Turner received his Bachelor of Science degree in Ceramic Engineering from the University of Illinois.

to Page 53 →

WE DON'T SELL BATHTUB COVERS...

ANYMORE!

There was a time when we sold many big table tops to cover kitchen installed bath tubs in renovated New York apartments. BUT NO MORE.

Today the best kitchen tables and cabinets have life-time VITREO tops.

Ironer manufacturers know that VITREO tops add value to their fine machines. They give the user an extra, permanent, easily cleaned table.

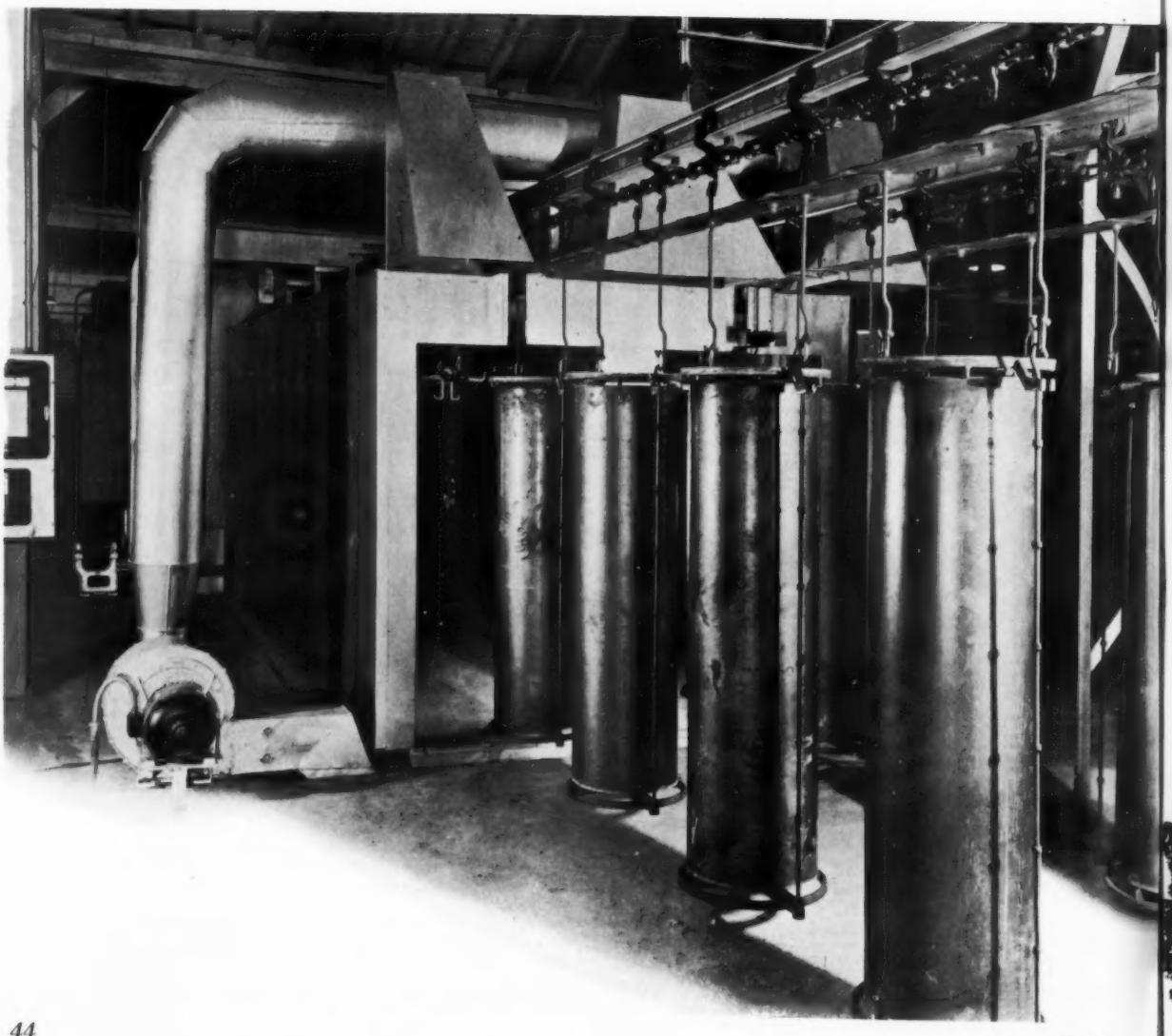
For the same reasons, manufacturers of cabinet water heaters use VITREO for the tops on their cabinets.

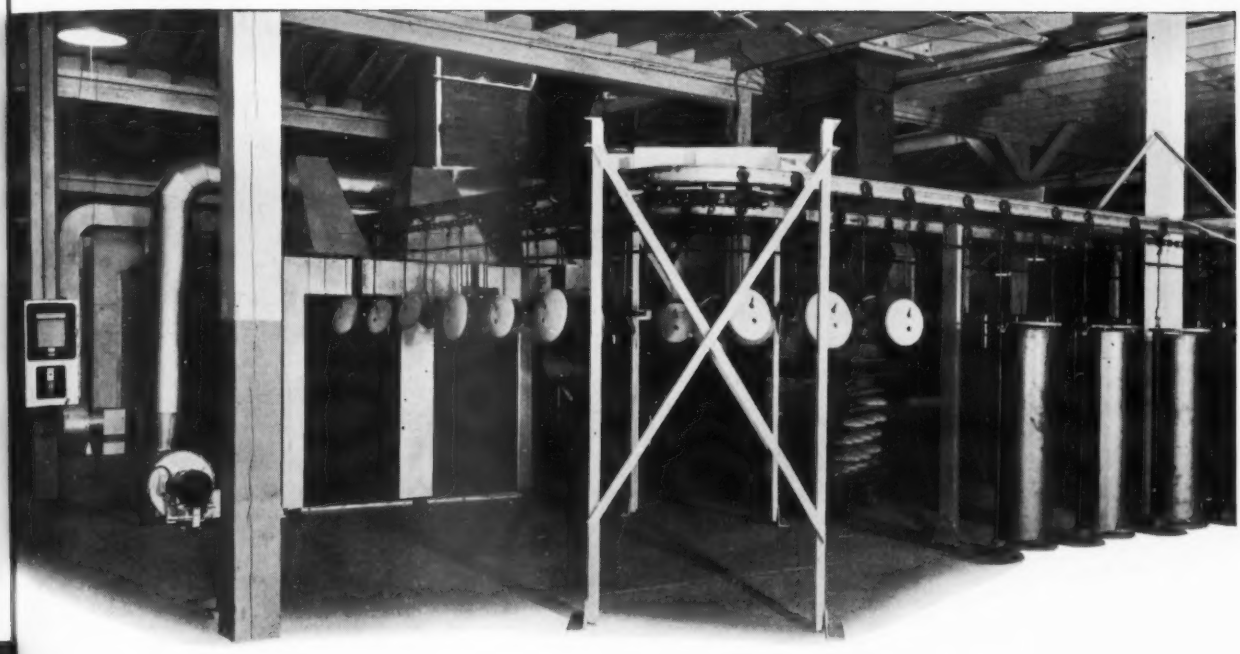
Buy VITREO if your appliance top is to be used for a table.

VITREOUS STEEL PRODUCTS CO.

BOX 1791, CLEVELAND 5, OHIO *(Factory at Nappanee, Ind.)*

PRODUCTION UP
COSTS DOWN





in another new U-type furnace

Engineered by Ferro

of course!

Porcelain enamel *hot-water tanks*, up to 4 feet in height, are now being fired *vertically* . . . in a *continuous* furnace . . . and at lower cost than ever before.

A new Ferro U-Type Furnace, designed by the same engineers that have built nearly *ninety per cent* of all modern porcelain enameling furnaces constructed in the past two decades, has greatly increased production along with lowering costs. It has also improved the quality of the porcelain enameling.

Like all Ferro U-Type Furnaces, this particular unit is as compact as it is efficient. In short, it's *the answer* for this type of product. Write for full details—they're yours for the asking.

FERRO ENAMEL CORPORATION

4150 EAST 56TH STREET CLEVELAND 5, OHIO

Editorial conference

→ *from Page 27*

traced the rapid growth of the industry during recent years and pointed to a great many worthwhile developments. Porcelain enamel, he said, is a thin layer of glass fused onto a metal and it has the same properties as glass. It is hard, will resist high temperatures, and is durable. As to breakability, Dr. Andrews explained, "If we bend the iron, we break the glass." He referred to protection from corrosion, the color and beauty possibilities in the use of porcelain enamel and its permanency. He stated further that the ceramic engineers have done valuable work, and that whereas formerly the thickness was 50 to 60 one-thousandths of an inch, it is now twelve one-thousandths of an inch thick and there is not much breakage possible. The Bureau of Standards tests were spoken of, as were the forums held for the past eight years by the Institute for discussion of problems pertinent to the use of this material.

"Dean" Chapple traces the history

The last speaker was Bennett Chapple, Sr., vice president of The American Rolling Mill Company, introduced as the "Dean of Enameling Steel Men." Mr. Chapple gave the historical background of the industry — telling where it came from and where it is to go. He said that early history reveals that porcelain enamel was used for jewelry and decorative arts, many cloissone vases giving evidence of that period.

Mr. Chapple stated that he remembers distinctly the first table top finished in porcelain enamel that showed no warp (an earlier condition that prevailed). "That made us wonder," he stated, "what it would mean to the commercial life to have a possibility such as this." "Over the years," stated Mr. Chapple, "many problems have been solved — gigantic refrigerators, great beautiful objects with no sign of buckle or warp have been made possible through the use of porcelain enamel." He paid a tribute to the engineers who made this condition possible. He referred to the Chicago World's Fair and some specticular methods that had been used there to highlight porcelain enamel, such as the Porcelain Enamel Parade.

The possibility of kitchens in colors with the use of porcelain enamel was referred to enthusiastically. Mr. Chapple referred to Armco's porcelain enameled Research Building at Middletown, Ohio, which he stated was built ten or fifteen years ago. He referred to the great service to mankind in the use of porcelain enamel in the "wedding of glass and iron."

A stimulating discussion took place between speakers and audience on the potentialities of porcelain enamel, identification labeling and other problems. Each guest was presented with a set of informative literature, some of which had been charted for display during the meeting, and also with a porcelain enameled ash tray.

ANNOUNCING . . .

A new jobbing plant — at your service

CHICAGO'S newest porcelain enamel jobbing plant, Lawndale Enameling Company, is now ready to serve you. If you have a product, either steel or cast iron, that should have the lifetime protection and sales appeal that only porcelain enamel can offer, call us in. We shall be glad to work with you.

The owners and operators of this new plant represent a combined experience of 41 years in practical enamel shop operation. Our organization has both the technical and practical training to give you the kind of results you want.

Phone or write to –

LAWNDALE ENAMELING COMPANY • CHICAGO

1137-1139 West 14th Street (Postal Zone 8) • Telephone Chesepeake 5495

Keep Production UP and Costs DOWN

WE'VE SAID it before and we say it again —there *is* a way to keep production up and costs down in the mill room. As everyone knows, the way to keep production up is to keep every mill in first class running condition. The way to keep costs down is to use equipment and supplies that are both economical to buy and economical to use.

Mills can be kept running longer and at lower cost if they are lined with McDanel *extra-fired* mill lining brick. And too, McDanel *mill-tested* grinding balls assure uniform grinding and longer life per load.

We also repeat—order as far ahead as possible. We are increasing production as rapidly as possible without sacrificing the standards of quality that have won industry-wide acceptance for McDanel products.

McDANEL REFRACTORY PORCELAIN CO.

BEAVER FALLS, PENNSYLVANIA

Chicago Vitreous Enamel Product Company • Exclusive representatives for the enameling industry.

McDANEL MILL LINING BRICK

A new west coast plant

→ *from Page 16*

booths set back-to-back. They occupy a space 40 ft. by 48 ft. in size. Water wash reclaim is used. The air entering the booths is heated and filtered through a motivated oil curtain. A 6 ft. pit is provided under the heavy parts line for under-side spraying.

When the white line leaves the overhead drying ovens it parallels the furnace conveyor for a considerable distance, thus allowing ample time for transfer. Prior to transfer, however, the conveyor has passed through a department where any necessary brushing or other work can be accomplished. When the white work emerges from the furnace it is transferred again to the cooling chain, which this time serves also as a take-away chain to finished work storage areas.

Without a doubt, the overhead drying ovens and the multiple conveyor systems are the outstanding features of the Norris installation. The ground coat chain is 680 ft. in length; the white coat chain 720 ft.; and, as previously stated, the cooling chain travels 700 ft. This does not include the lengthy furnace chain nor the white booth conveyor. Production stations along the conveyor systems are conveniently located for unloading and storage of work in process when changing from ground coat to white coat work, or vice versa.

The mammoth overhead drying ovens are completely out of the way, and are suspended crosswise of the plant above one end of the furnace and over the brushing and inspection areas. Numerous smaller production conveniences are provided such as a black edge booth on the ground coat line just after it emerges from the drying oven and before it reaches and parallels the furnace chain. The overhead cooling chain, the elevated slip storage platform, and the frit storage mezzanine all add to available floor space.

Provision for employee welfare

Employee welfare has been given thoughtful consideration. Dust-free working conditions minimize health hazards. Large locker and rest rooms for both men and women are located convenient to the department, and employees in the department will have access to other company employee facilities such as cafeteria, health service, etc.

This large new plant substantiates prior predictions that West Coast enameling would mushroom in the post-war era. There is sufficient leeway for tremendous expansion without danger of market saturation for many years to come. The westward shift in population densities and the extended home building programs planned for these newcomers will result in heavy demands for enameled products that will tax West Coast enamelers to the limit.

The Board of Directors of Philco Corporation declared a dividend, on February 11, of twenty cents per share of common stock payable March 12, 1946, to stockholders of record February 28, 1946. The previous regular dividend was 20 cents per share and was paid on December 12, 1945.

CHEMICAL "DEPARTMENT STORE" TO INDUSTRY

NICKEL SULPHATE

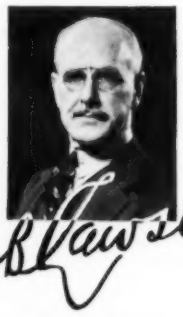
Available from stock . . . Also complete line of chemicals for CERAMIC and PLATING INDUSTRIES.

***Write, Wire, or Phone* CHerry 0296!**

W. B. LAWSON, INC.

(SUBSIDIARY OF FERRO ENAMEL CORPORATION)

Union Commerce Building • Cleveland, Ohio

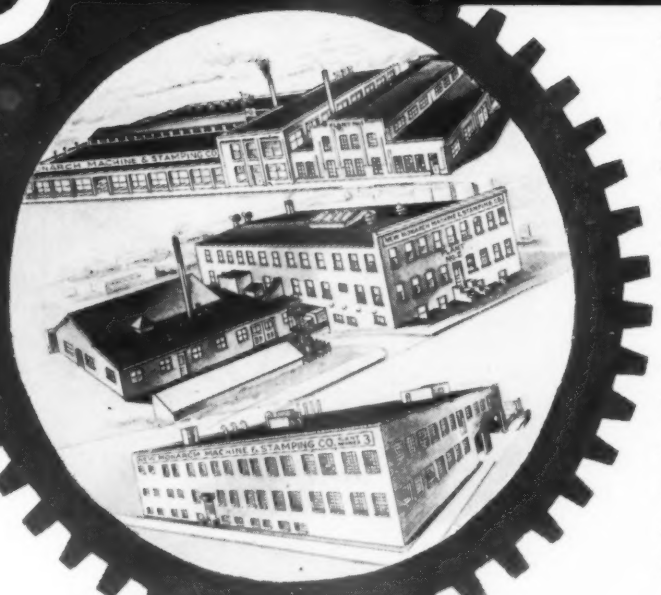


Merchants, Manufacturers' Sales Agents,
Industrial Chemicals and Nonferrous Metals.
Warehouse stocks in New York, Cleveland, St. Louis and Detroit.

•

Distributors for American Potash & Chemical Corp. (Borax and Boric Acid); Darling & Co. (Oleic and Stearic Acids); Duquesne Smelting Corp. (Nonferrous Metals, Zinc Dust); Ferro Drier and Chemical Co. (Driers and Metallic Soaps); Lindsay Light & Chemical Co.; Merck & Co. (Laboratory Reagent Chemicals); Philadelphia Quartz Co. (Silicates); Stauffer Chemical Co. (Sulphur); Tennessee Corp.; Virginia-Carolina Chemical Co.; Wyandotte Chemicals Corp.; and others.

3 MODERN MONARCH PLANTS GEARED TO TOP PRODUCTION

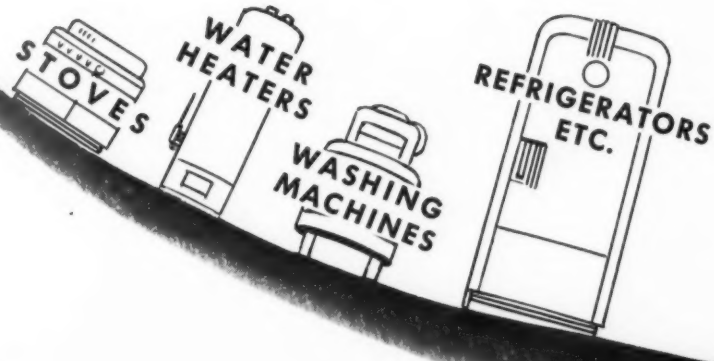


These thoroughly modern, well equipped plants, geared to high speed, war time production, are fully tooled for all kinds of metal stampings or assemblies — completely manned in all departments and prepared to operate up to 3 shifts per day.

Through our all-out war effort, we developed many new ideas in better and more practical methods of mass production. This experience and much newly added equipment will soon be offered for the vast peace time production program. Having no established market of our own, our undivided attention can be given to your product.

Consult New Monarch now about your future manufacturing needs.

STAMPINGS FOR



OUR POST WAR PROGRAM

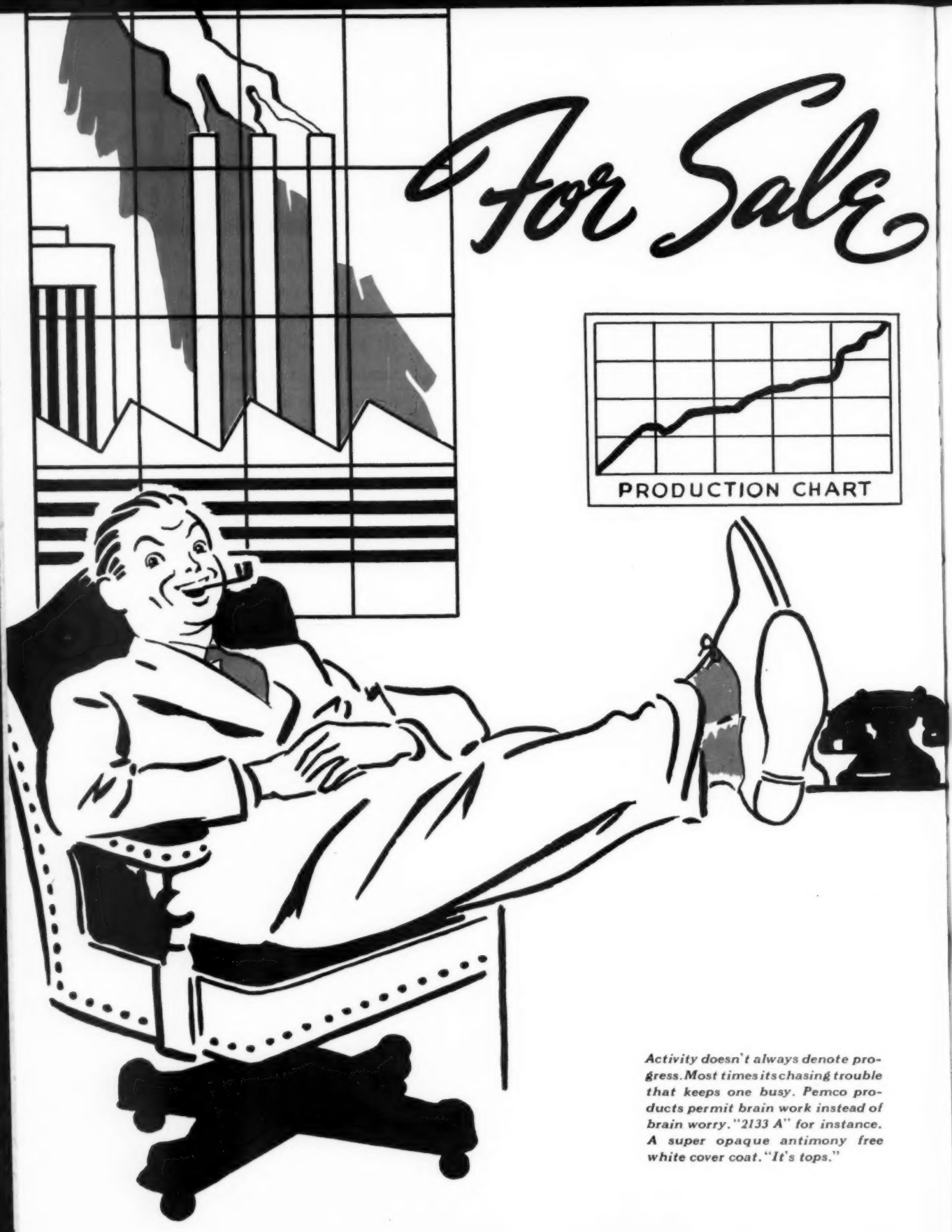
consists of a complete manufacturing service, including besides Special Tooling to meet your particular requirements, such items as Stampings, Degreasing, Painting, Bake Enameling, Packing and Shipping — a service that will fit into your program, wholly or in part, with utmost profit to you.

MONARCH QUALITY

When you think of Stampings, think of

NEW MONARCH MACHINE & STAMPING CO.

406 S.W. NINTH STREET DES MOINES 9, IOWA



Activity doesn't always denote progress. Most times it's chasing trouble that keeps one busy. Pemco products permit brain work instead of brain worry. "2133 A" for instance. A super opaque antimony free white cover coat. "It's tops."

CONTENTMENT

Fused into every pound of Pemco frit is that uniform quality that permits uninterrupted production without worry and with the minimum of care and attention.

●

Produced in the ONLY wholly continuous smelters in the industry—electronically controlled—Pemco frit performs with such unusual smoothness that you have time to think and to develop your thoughts adding to your plant efficiency and consistently lowering production costs.

●

From the finest black edge ever produced to the newest of Acid Resisting White Opaque Cover Coats and including the "Famous 16" Basic Colors . . . . . each individual frit or color has been perfected to make your job easier physically and to improve the appearance of your product. They are condusive to brain work instead of brain worry. To the enameling plant personnel they represent "CONTENTMENT—FOR SALE"

●

If in your mind the slightest doubt exists as to the superiority of Pemco Products tell us please and we will gladly demonstrate — in your plant — that there is "CONTENTMENT—FOR SALE"

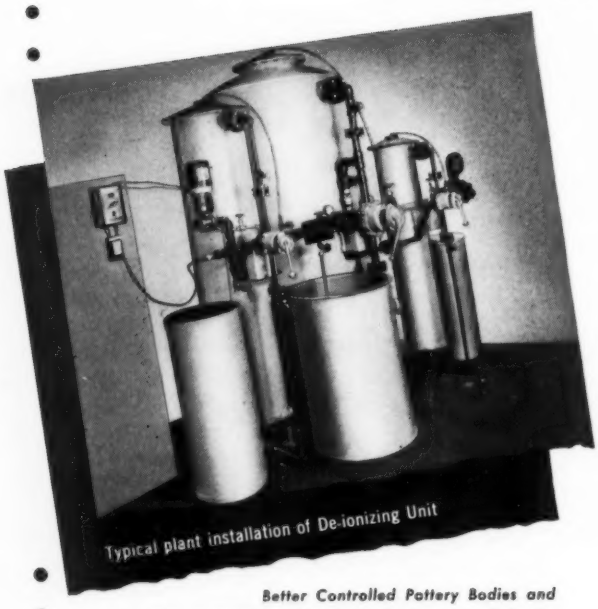
PEMCO CORPORATION

BALTIMORE MARYLAND

"ALWAYS BEGIN WITH A GOOD FINISH"

Lower your rejects by making your enamels with

DE-IONIZED WATER



Typical plant installation of De-ionizing Unit

Reduction in rejects and elimination of copper heading have been obtained in leading ceramic plants when De-ionized Water was used in making the enamel. The varying acidic and basic reactions of natural waters affects the proper flocculation characteristics of frit and clay. Adjusting the enamel to make it function properly is costly as it requires materials and takes time.

You can assure yourself of a reliable water for enamel, by installing an ILLCO-WAY De-ionizing Unit. It will produce all the water your plant requires for capacity operation at a cost from 1% to 10% of that of distilled water. No fuel required, no cooling water. Maintenance is simple—no periodic dismantling for cleaning. Write for literature today!

Illinois Water Treatment Co., 866-3 Cedar St., Rockford, Illinois
7310-R3 Empire State Bldg., New York City

Water Treatment Engineering

Better Controlled Pottery Bodies and Glazes: ILLCO-WAY De-ionized Water can help the potter control his body and glaze compositions.

TESTED IN THE LABORATORY · ILLCO-WAY · PROVED IN THE FIELD

The R & M Moyno Ends Enamel-Pumping Troubles

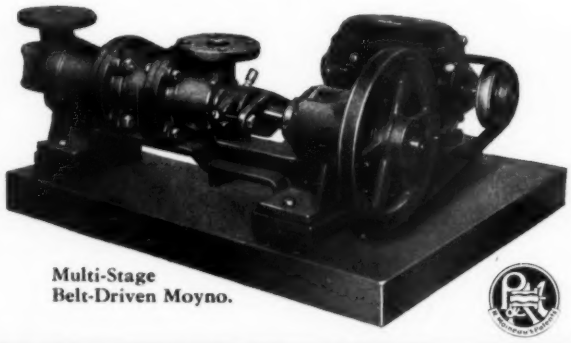
THIS NEW BOOK TELLS WHY and HOW

In just a few short years the R & M Moyno has become the *"accepted"* pump of the enameling industry—and for *many* very good reasons. These amazing, simple pumps handle abrasive fluids with remarkable *dependability.* They deliver with positive pressure without pulsation, and with a very minimum of agitation. A single rotor-stator pumping element does *all* the work, takes *all* the wear—and it's easily *renewable.*

YOU GET THESE ADVANTAGES

Moynos have no valves or other flow restrictions, no pistons, no high velocity impellers, no end seals. They use no portion of the housing as sealing surface. Rotor and stator work together to form progressing, *ever-changing* seal lines for positive displacement, and reversible, self-priming operation.

A popular model for dip tank circulation and transfer service is the belt-driven Moyno shown below. These and other Moyno pumps have established an enviable reputation in enameling plants all over the country. Moynos pump practically *anything* that will flow through a pipe. Write today for new Book No. 20, "A Turn for the Better...," and the name of your Moyno distributor.



Multi-Stage
Belt-Driven Moyno.

ROBBINS & MYERS · INC. MOYNO PUMP DIVISION · SPRINGFIELD, OHIO
In Canada: Robbins & Myers Co. of Canada, Ltd., Brantford, Ont.

MOTORS · HOISTS · CRANES · MACHINE DRIVES · FANS · MOYNO PUMPS · FOUNDED 1878

→ *from Page 42*

Following his graduation in 1943, he entered the Army. He was a First Lieutenant, Corps of Engineers, and spent the major portion of his service in the European Theatre.

According to the company announcement, Turner will be delving into the problems of new applications of porcelain enamel and other ceramic products.

Max Holscher returns to Seeger as enameling superintendent

Max Holscher, now on terminal leave from the Army, has returned to Seeger-Sunbeam Corporation, Saint Paul, as superintendent of the porcelain enamel plant, according to N. H. Griebenow, vice president and works manager.

Holscher was with the Seeger Refrigerator Company before he was inducted into the Army in 1942. He later received a commission in the Armament Office, going to Italy in the Supply and Reserve Office.

Max is a graduate of the Ohio State University Ceramic Engineering School, Class of 1940. Prior to joining Seeger in 1940 he had worked for the Florence Stove Company in 1935 and 1936, and Westinghouse Electric and Manufacturing Company, Mansfield, Ohio, in 1937 and 1938, where his duties were in the Mill Room and Control Department.

Mrs. Pauline Treisch, former home service director for the Mansfield district of the Ohio Fuel Gas company, has been named director of home service for the Tappan Stove Company. She succeeds Miss Florence Windecker who resigned to enter another field of work.

van der Kloet to Erie Enameling

H. R. Spencer, president of The Erie Enameling Company, Erie, Pa., has announced appointment of officers for the company's Architectural Division.

W. M. Harper, who has been with the company for some time, has been made manager of sales. Mark van der Kloet has been appointed manager of engineering and construction.

"Van" was with the Gulf Oil Corporation for fourteen years, where he was in charge of their service station building program. He has been responsible for design and construction of service stations involved in one of the largest programs of any major oil company. He is a native of Holland and a graduate of the University of Delft.

Mr. van der Kloet will be remembered by enamelers for his talk before the Porcelain Enamel Institute Architectural Forum in Cleveland. (See August 1944 *finish.)*

Fairchild takes job as secretary of plumbing mfrs. assn.

The Sanitary Cast Iron Enameled Ware Association has announced the election of I. J. Fairchild as secretary.

Mr. Fairchild is well known throughout the plumbing industry, having for many years served as chief of the division of trade standards, National Bureau of Standards, Washington. He retired voluntarily from this position on November 30, 1945.

Mr. Fairchild is opening an office in Washington and will carry out an active program for the association. This program will include statistics, fact-finding, simplification, standardization, information and related work applicable to bathtubs, sinks, lavatories and other fixtures so vital to sanitation and health.

Other officers elected at the last annual meeting are: Radford R. Crane, chairman; O. A. Kroos, vice chairman; and K. F. Prestin, treasurer.

The National Bureau of Standards has announced that Floyd W. Reynolds will succeed I. J. Fairchild as acting chief of the division of trade standards.

Pennsalt net earnings over 1¼ million

Subject to renegotiation, and after deduction of Federal taxes, Pennsylvania Salt Manufacturing Company reported net profits for the 12 months ended Dec. 31, 1945 of $1,288,329.59 or $1.72 per share on 750,000 shares of $10 par stock outstanding, which compares with the earnings for the 12 months ended Dec. 31, 1944 of $1,413,956.26 or $1.89 per share.

Refrigeration division at Mills appoints new manager

Harrison J. Hedrick, who served for 2 years as a commodity specialist with the Commercial Refrigeration and Air Conditioning Section of the Office of Price Administration, Washington, D.C., and formerly was assistant sales manager of the Refrigeration Division of Mills Industries, Inc., Chicago, has been appointed manager of the Division by Gordon B. Mills, vice president in charge of sales.

Prior to his association with Mills, Hedrick was for ten years president and general manager of Jewett Refrigerator Co., Buffalo, N.Y.

Washington round-up

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requirements for 1946 will be 1,040,000 tons with the supply down to 860,000 tons. Lead producers tried recently to get OPA to raise the price to consumers from 6½ cents per pound, which they are paying now, to 8 cents. They stated that the present price, instead of restricting less-essential use of lead, was encouraging it. The recommendation was turned down by Reconversion Director John W. Snyder.

The sulphuric acid supply remains adequate and there is no indication of stagnant inventories.

The demand for leaded zinc oxide is reportedly strong and production appears barely adequate for current consumption. The situation in respect to lead-free zinc oxide is relatively better and stocks are being built up to a point where they approximate about a 3-months demand.

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Borax and boric acid are still subject to inventory control, and only a practicable minimum working inventory is permitted.

Soda ash supply appears satisfactory as no complaints or shortages have been reported. The ceramic industries are taking more than normal amounts of current production.

Titanium dioxide is in short supply in relation to demand and there is said to be a need for increased plant capacities which cannot be remedied until the construction situation is improved. The bottleneck breaking regulation, PR-28, was recently amended to permit a CC rating for repairs and construction of titanium oxide facilities.

Zircon and zirconium metal, oxide, alloys and compounds have been removed from price control by CPA. Barium also is no longer under a price ceiling.

Details of heat resisting enamel to be aired

The National Bureau of Standards has lifted the lid of secrecy on a new enamel process that was developed during the war primarily to protect the exhaust systems of military internal combustion engines. The ceramic coating was developed when shortages of certain metals used in the manufacture of stainless steel made it necessary to find a substitute for this alloy in the exhaust stacks of aircraft engines. The new ceramic enamel is applied in thin coats of not more than 2 to 3 thousandths of an inch. It has a dull finish and is applied at a temperature of 1600° Fahrenheit. It is highly heat resistant and the Bureau of Standards anticipates that it will have important peacetime applications.

Dr. Edward U. Condon, Director of the Bureau of Standards, is addressing letters to all manufacturers to whom disclosure of the new enamel process has been made confidentially, advising them that the veil of secrecy is now lifted. Dr. Condon is also informing manufacturers that the Bureau has pending an application for a patent. If the patent is granted, the new process will be available to all who wish to use it, without payment of fee for the privilege.

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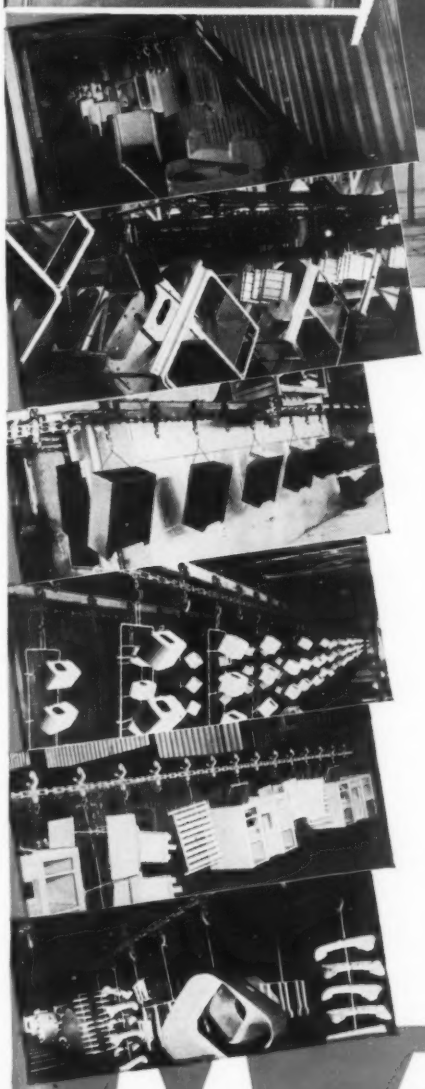

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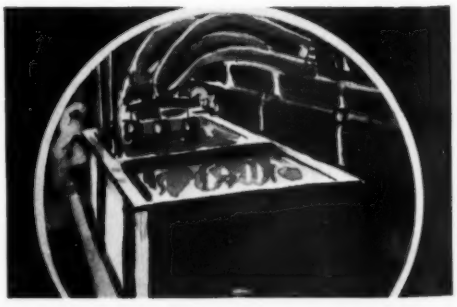

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